

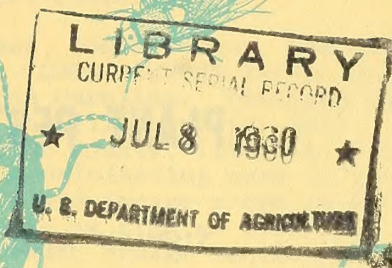
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Cooperative **ECONOMIC INSECT REPORT**

Issued by

PLANT PEST CONTROL DIVISION

AGRICULTURAL RESEARCH SERVICE

UNITED STATES DEPARTMENT OF AGRICULTURE

AGRICULTURAL RESEARCH SERVICE

PLANT PEST CONTROL DIVISION

SURVEY AND DETECTION OPERATIONS

The Cooperative Economic Insect Report is issued weekly as a service to American Agriculture. Its contents are compiled from information supplied by cooperating State, Federal, and industrial entomologists and other agricultural workers. In releasing this material the Division serves as a clearing house and does not assume responsibility for accuracy of the material.

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Survey and Detection Operations
Plant Pest Control Division
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United States Department of Agriculture
Washington 25, D. C.

COOPERATIVE ECONOMIC INSECT REPORT

Highlights of Insect Conditions

CUTWORMS damaging to crops in areas of Montana, South Dakota, Nebraska, Kansas, Missouri, Iowa and Maryland. (pp. 510, 536). CORN EARWORM larvae present in Delaware and Kansas; damaging peanuts in North Carolina. WIREWORM damage reported in Montana, North Dakota, Missouri and Illinois. (p. 511). ARMYWORM abundant enough to warrant treatment in Clinton County, Illinois; causing some damage to barley and grasses in Missouri; and defoliating corn in areas of Iowa. (pp. 512, 536). THRIPS damaging cereal and forage crops in several states. (p. 513). ALFALFA WEEVIL larval counts as high as 2,000 per 100 sweeps in Colorado and 30-45 per sweep in Nevada; damage becoming noticeable in Utah and Rhode Island; and causing heavy injury to second-growth alfalfa in Maryland. (pp. 515, 536). MEXICAN BEAN BEETLE heavy on soybeans in southwestern Alabama and moderate in soybean field in Maryland. (pp. 517, 536). BEAN LEAF BEETLE damaging soybeans in Delaware, Maryland, Illinois and Iowa. (p. 517).

CODLING MOTH emergence past peak in several states; eggs present in Massachusetts and Oregon and larval entries noted in Ohio and Missouri. (p. 517). PEAR PSYLLA severe on pears along Snake River, Whitman County, Washington. (p. 518). PECAN NUT CASEBEARER damaging pecans in several states and PECAN PHYLLOXERA of concern in Oklahoma. (p. 519).

Second statement of BEET LEAFHOPPER conditions in southern Idaho. (p. 520). COLORADO POTATO BEETLE very active in New Jersey and larvae abundant in Rhode Island. Adults present in Idaho. (pp. 5213, 536).

HORNWORM eggs and larvae noted on tobacco in Maryland; first of season. SEED-CORN MAGGOT caused severe damage to newly set tobacco in Massachusetts. (p. 524).

BOLLWORMS - Eggs averaged 25 and larvae 5 per 100 terminals in cotton in southern Georgia. Infestations moderate in Henry and Coffee Counties and severe in Autauga County, Alabama. (p. 525).

Aerial surveys show visible defoliation by LARCH CASEBEARER to cover more than 500 square miles in Idaho. (p. 528). Severe injury by an AGROMYZID (Agromyza aristata) to American elm noted in Fargo area of North Dakota; heaviest ever recorded. (p. 530).

Two introduced beneficial moths reported on in California: Tyria jacobaeae, released in 1959, has apparently become established; and Leucoptera spartifoliella was released June 7 near Georgetown, El Dorado County. (p. 534).

JAPANESE BEETLES noted in Delaware and North Carolina. (p. 534).

INSECT DETECTION: New state records reported were vetch bruchid in Nebraska (p. 516); pale-sided cutworm in California (p. 526); a scale insect (Matsucoccus gallicolus) in Delaware (p. 530); and a scarabaeid (Plectris aliena) in Florida (p. 535). New county records reported were alfalfa weevil in Dawson County, Nebraska (p. 515); Tychius stephensi in Bureau County and clover seed weevil in Henry County, Illinois (p. 516); European pine sawfly in Jefferson and Van Buren Counties, Iowa (p. 527); face fly in Montgomery, Prince Georges, Carroll and Harford Counties, Maryland (p. 531).

CORRECTIONS (p. 535).

ADDITIONAL NOTES (pp. 536, 537).

Status of some IMPORTANT INSECTS in the United States. (p. 539).

INSECTS not known to occur in the United States. (p. 541).

Reports in this issue are for week ending June 10 unless otherwise indicated

WEATHER OF THE WEEK ENDING JUNE 13

Temperatures averaged a few degrees above normal this week over much of the Pacific coast-Great Basin-northern Rocky Mountain-northwestern Great Plains area, and slightly above normal from southwestern Texas into western Tennessee and Kentucky. Below-average readings prevailed much of the week in coastal areas of the Pacific Northwest, from the southern Rocky Mountains across the central Great Plains to the Great Lakes, and from the Southeastern States to New England and the Great Lakes. Cool, dry polar air left temperatures more than 6° below the weekly average in much of Wisconsin, northern Ohio, and western sections of Pennsylvania and New York. Precipitation along the west coast was confined to a very few light and widely scattered showers. Exceptionally sunny weather prevailed, with 100 percent of possible sunshine at several stations in the Pacific Northwest.

Scattered showers and thunderstorms in the Plateau States early in the week left local precipitation totals of 1/2 to over 1 inch in some areas. More vigorous thunderstorms dotted the Great Plains and Rocky Mountain States. The most severe of these extended from the South Plains and Panhandle of Texas into Kansas. Almost daily rainfall left weekly totals of over 2 inches in this region, with several stations recording 5 to 6 inches in a single day. Widespread showers and thunderstorms left beneficial rain in much of the northern Great Plains, with scattered areas receiving more than 2 inches during the week. Fieldwork was held up by wet fields in several areas. Moderate to heavy showers and thunderstorms extended eastward through the central Mississippi Valley, the Ohio Valley, and the West Virginia-Maryland-Pennsylvania-southern New York area over the weekend. Totals ranged from 1/2 to 1 inch in many places with locally heavier amounts. Rapid planting progress was reported from the Middle West before these rains. Showers in Florida left 1 to 3 inches of precipitation locally in the central and southern portions, with lighter amounts in the northern sections.

Generally dry, sunny weather extended from south Texas eastward through the Southern and Middle Atlantic States, and also prevailed in New England and the upper Great Lakes area. While isolated thunderstorms occurred in the Southern States, many areas have had no rain in the past 3 to 4 weeks and crops in these sections, particularly in south Texas, Louisiana, Mississippi, Tennessee, Alabama, now show a critical need for moisture. Moisture conditions from Georgia to Virginia are mostly adequate, although some areas are dry. (Summary supplied by U. S. Weather Bureau).

CEREAL AND FORAGE INSECTS

GRASSHOPPERS - CALIFORNIA - Populations lighter than in past years. Rather extensive treatment at ranch level in southern San Diego County; some spray and bait being used in Santa Barbara County; in Shandon area, several hundred acres will require control in San Joaquin Valley, and in the Sacramento Valley a few local areas will require control in near future. Populations 25-30 per square yard on rangeland, with some bait used, in Pentz, Bangor, Honcut areas of Butte County. Some spot treatment in English Hill, Solano County; in almond area of Yolo-Colusa Counties, some bait applied and insecticide barrier strips will be applied as populations threaten to move into cultivated orchards. Some local baiting in Glenn and Tehama Counties. Hot weather may result in early mass movement as range grass dries. (Cal. Coop. Rpt.). TEXAS - Inspections made in Moore, Potter, Dallam, Sherman, Hartley, Oldham and Hansford Counties during period May 19 through 27. Dominant species were Aeoloplides turnbulli bruneri, Aulocara ellioti, Melanoplus bivittatus, Cordillacris crenulata and Hesperotettix speciosus. One check of soil bank land in Moore County showed A. turnbulli bruneri as 18 per square yard in the field and 60 on the margin. All other species relatively light. (Russell, Tapscott). Checks made in Lynn and Terry Counties revealed M. packardii, Amphitornus coloradus and M. occidentalis as dominant species. All counts both in field and margin less than 15 per square yard. (Whitaker). Undetermined species found heavy in Lamar County. Most in second instar and still around hatching beds. (Turney). OKLAHOMA - Counts averaged 2 nymphs per square yard in rangeland in Stephens County (Hatfield) and second and third-instar nymphs averaged 3 per square yard in alfalfa margins in McIntosh County; dominant species in McIntosh County were M. bivittatus and M. differentialis. (Goin). COLORADO - Melanoplus spp. predominant species present. Rangeland counts were: 0-30 per square yard (first to third instars), concentrated in small areas, on 2,500 acres southwest of Walsenburg, Huerfano County; 10-20 per square yard (first and second instars) south of Cherry Hills, Arapahoe County; 5-10 per square yard (second to fourth instars) west of Sedalia, Douglas County; 0-2 per square yard in Teller County. (Colo. Ins. Sur.). UTAH - A. ellioti and M. bilituratus average 50 per square yard at some Snowville-Blue Creek areas and 10 per square yard in Rozel flats area, Box Elder County. (Thornley, Knowlton). Grasshopper hatch general in Davis County, with some nymphs one-half grown. Camnula pellucida infesting a 3-4 square-mile meadow area near Richfield, Sevier County, 10-50 per square yard. Other outbreaks reported from Kane County, 6 miles north of Glendale, and from Beaver County on pasture lands. Grasshoppers, recently hatched to winged forms, in areas of Washington, Kane, Sanpete and Iron Counties, with populations rarely high. (Knowlton). KANSAS - Counts of M. bilituratus and M. bivittatus in field margins in south central and southeastern areas less than 1 per sweep. Infestations spotty and not general. Stage of growth ranged from second-instar nymphs to adults for M. bivittatus and second to fourth instar for M. bilituratus. (Peters). SOUTH DAKOTA - Nymphal surveys through central area indicated only light hatching occurring. Highest counts 50 per square yard on field margins in Hughes County. Very light elsewhere in area. (Burge). MINNESOTA - Development of eggs as follows: Central and west central districts - M. femur-rubrum coagulated to eye-spot; M. bivittatus and M. bilituratus segmentation complete; M. differentialis segmentation complete. Light hatch observed in west central, central and northwest districts. Hatch of M. bivittatus and M. bilituratus expected in Benson area during week ending June 17; eggs plentiful in soil bank land in area. (Minn. Ins. Rpt.).

NORTH DAKOTA - Nymphal survey conducted in southeast and south central sections showed generally noneconomic populations in fields, field margins and roadsides. However, survey stops in weedy soil bank fields near Brampton, Sargent County, and Oakes, Dickey County, showed threatening to severe infestations. M. bilituratus, first to fourth-instar nymphs, averaged 100 per square yard at Brampton stop. The Oakes infestation consisted of 50 percent M. bilituratus and 50 percent M. bivittatus and counts averaged 100 nymphs per square yard. Elsewhere, M. bivittatus appeared to be dominant species with development ranging from first to third instar. Cool temperatures and heavy plant growth appear to have slowed hatch in heavy soil areas. Survey in southwest shows mostly noneconomic infestation in crop and rangeland. Range stops in 2-section area of McKenzie County

showed an average of 36 Ageneotettix deorum first-instar nymphs per square yard. (N. D. Ins. Sur.). WISCONSIN - Eggs of M. femur-rubrum ranged from coagulated to eye-spot in Marinette, Green Lake and Waushara Counties; and M. bilituratus nymphs (first to third instar) common but not numerous in Sauk, Green Lake and Waushara County alfalfa. (Wis. Coop. Sur.). ILLINOIS - Nymphs varied 0-30 per 100 sweeps in clover and alfalfa. (Ill. Ins. Rpt.). MARYLAND - Moderate numbers of small nymphs noted in soybean fields on lower Eastern Shore. (U. Md., Ent. Dept.).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW YORK - Moth emergence in screen-house at Poughkeepsie reached 25 percent by June 3; egg masses began hatching May 30. (N. Y. Wkly. Rpt.). MASSACHUSETTS - Eggs found in Hampshire, Plymouth and Middlesex Counties. (Crop Pest Cont. Mess.). DELAWARE - Fresh egg masses present in corn in Kent County. Larvae, mostly first with some second instars, abundant in cornfield in southeastern Sussex County. Larvae present in other fields of corn in same county. First, second and third-instar larvae present in wheat in northwestern Sussex County. (Burbutis, Mason). MARYLAND - First and second-instar larval infestations ranged 10-60 percent on early planted field corn in Dorchester County. Light in field and sweet corn in Talbot County. (U. Md., Ent. Dept.). OHIO - First oviposition noted June 2 at Columbus. Adult emergence 10 percent at Columbus on June 7, with some adults flying; an average of 4 egg masses per 100 plants examined, all freshly laid. (Triplehorn). ILLINOIS - Pupation complete, with over 80 percent emergence in southern area. Egg masses in one extremely early patch of sweet corn 60 per 100 plants, with over 60 percent hatch. Emergence ranged 25-80 percent in central area and 0-25 percent in northern area. (Ill. Ins. Rpt.). IOWA - Moths began flying at Ames on May 31; pupae 8 percent emerged at Ankeny on June 3. (Iowa Ins. Inf.). MINNESOTA - Pupation in south central and southwest districts nearly complete; in western edge of southwest, pupation 50 percent, much lower than rest of district. (Minn. Ins. Rpt.).

CUTWORMS - IDAHO - Adults of various species emerging in large numbers throughout State from Moscow south and east to Bingham County and are being attracted to lights in extremely large numbers. In southern area, Chorizagrotis auxiliaris appears to be predominant. This is same general area where the extremely heavy outbreak of this species occurred during early spring in rangeland areas. In Moscow area, some C. auxiliaris evident, but dominant species are Platyperigea extima and Spaelotis havilae. (Bishop, Portman, Manis). MONTANA - Most counties in northeastern area have varying infestations of Agrotis orthogonia. Infestation extremely spotted, with the general area being about 100 miles long by 50 miles wide. (Roemhild, May 15-June 1). SOUTH DAKOTA - C. auxiliaris causing much damage to corn in north central area. Also found in other small grain fields but damage noted only in corn at present time. Counts in corn fields averaged 3 per linear foot of row. Some hills of corn had populations as high as 6 per hill. A. orthogonia found in north central area in corn fields along with C. auxiliaris. Populations varied 1-3 per linear foot of corn row. (Mast). NEBRASKA - Area infested by cutworms, probably A. ipsilon, continues to expand. Surveys show that practically all corn fields in eastern third of State contain varying degrees of damage, ranging from less than 1 to 40 percent. Most larvae about one-half grown. Damage primarily to plants less than 5 inches tall. (Simpson). KANSAS - Unidentified species cutting off corn, 4-6 inches high, at or just below ground level, in field in Republic County; field had been band treated at planting time. Peridroma saucia larval populations high enough to treat regrowth alfalfa in field in Chase County. (Gates). MISSOURI - Stalks of corn throughout northern half of State continue to be damaged by Feltia subgothica, with most damage confined to north central and northeast areas. P. saucia causing damage to new growth of alfalfa in northwest; counts in field in St. Joseph area ranged 2-5 per square foot. (Munson, Thomas, Kyd). MARYLAND - An unspecified species has been very destructive to young corn at several locations in Allegany County. (U. Md., Ent. Dept.).

SOUTHWESTERN CORN BORER (Zeadiatraea grandiosella) - ARKANSAS - Eggs being laid in northern area, while in southern area second and third-instar larvae present in some corn. (Whitcomb).

STALK BORER (Papaipema nebris) - KANSAS - Attacking corn about 4 inches tall; moving from field margins in Pottawatomie County. (Burkhardt). Also collected from rye in Sedgwick County. (Peters).

CORN EARWORM (Heliothis zea) - DELAWARE - First larvae of season noted in alfalfa in northwestern Sussex County. (Burbutis, Mason). NORTH CAROLINA - Injuring peanuts in Columbus County. (Raper, Farrier). OKLAHOMA - Light in 4 alfalfa fields in east central area and 6-13 per 100 stalks in corn and grain sorghum in east central area (Robinson); 1-2 per sweep in alfalfa and 20 per 100 stalks in corn in Choctaw County (Goin). KANSAS - Observed in alfalfa in south central and southeastern areas; counts averaged less than 1 per sweep. (Peters).

CORN BLOTCH LEAF MINER (Agromyza parvicornis) - DELAWARE - Larvae fairly common and active in corn in Kent County. (Burbutis, Mason).

CORN LEAF APHID (Rhopalosiphum maidis) - OKLAHOMA - Counts ranged from occasional to medium in 6 fields of corn checked in east central area (Robinson) and medium to heavy (30 per stalk) in some corn and grain sorghum fields in Choctaw County (Goin). NEBRASKA - Very low populations of winged forms found in 50 percent of corn fields checked in east and northeast counties. (Simpson). IOWA - Present in oats at Ames. (Iowa Ins. Inf., June 6). WISCONSIN - First specimen recorded May 25 in trap at Arlington. Present in very low numbers in oat fields and increasing in barley fields. (Wis. Coop. Sur.). LOUISIANA - Heavy infestations on barnyardgrass near Laplace. (Spink).

CHINCH BUG (Blissus leucopterus) - OKLAHOMA - Light in 6 fields of corn checked in Hughes, Okfuskee and Okmulgee Counties; counts averaged up to 0.5 per stalk. Counts averaged 2 per linear foot in field of grain sorghum in Hughes County. (Robinson). KANSAS - Damaging field of sorghum in Montgomery County. (Peters).

CORN FLEA BEETLE (Chaetocnema pulicaria) - NEW YORK - Populations extremely varied at Poughkeepsie; counts in field of corn planted in mid-April on June 2 showed 53 beetles per 100 plants, and on June 3 in field near Kerhonkson showed 49 per 100 plants. Lesions of Stewart's disease found on at least 3 percent of plants in Poughkeepsie field; and at the Kerhonkson field, 1 percent of plants showed infection. (N. Y. Wkly. Rpt.). DELAWARE - Adults present in most corn fields in State; causing very light feeding injury. (Burbutis, Mason). OKLAHOMA - Light, 2 per stalk, in cornfield in Choctaw County. (Goin). Occasional to light in 6 fields of corn checked in east central area. (Robinson).

JAPANESE BEETLE (Popillia japonica) - NORTH CAROLINA - Counts 4-5 per cornstalk in 3-acre field in Cumberland County, with some stalks badly injured. (Chadwick).

SOUTHERN CORN ROOTWORM (Diabrotica undecimpunctata howardi) - DELAWARE - Adults present in alfalfa throughout State. (Burbutis, Mason). IOWA - Adults feeding on corn leaves. (Iowa Ins. Inf., June 6). NEBRASKA - Adults slowly increasing, but less than 1 per 10 sweeps. (Simpson).

WIREWORMS - MONTANA - Unspecified species caused some damage to small grains; several fields in Meagher County reseeded. (Roemhild, May 15-June 1). NORTH DAKOTA - A severe infestation of Hypolithus nocturnus attacking corn near Wimpleton, Barnes County; nearly 60 percent of plants in 60-acre field destroyed. Adjacent fields of barley and oats showed slight damage from wireworm feeding. Reports of wireworm injury to small grains received from northeast. (N. D. Ins. Sur.). MISSOURI - Damage to corn by Melanotus spp. evident in small areas throughout State. Damage to individual fields usually confined to small spots. In some cases, whole fields had to be replanted. (Munson, Thomas, Kyd). ILLINOIS - Wireworms reported from scattered locations; one cornfield had approximately 25 percent loss of stand. Of many fields examined, this would average about 2 percent loss. (Ill. Ins. Rpt.).

SPIDER MITES - ARIZONA - Tetranychus cinnabarinus very heavy on some corn in Yuma area. (Ariz. Coop. Sur.) NEW MEXICO - Oligonychus stickneyi building up on sweet corn and light to spotty in early field corn in Dona Ana County. (N. M. Coop. Rpt.).

RICE WATER WEEVIL (Lissorhoptrus oryzophilus) - LOUISIANA - Adults averaged 32 per 100 sweeps in rice in St. James Parish. A severe larval infestation found in Lake Charles area. More than 20 per rice stool collected in some fields. (Spink).

WHEAT STEM MAGGOT (Meromyza americana) - KANSAS - Several wheat fields infested in south central, southeast and east central areas; less than 1 percent of plants infested. (Peters).

WHEAT HEAD ARMYWORM (Faronta diffusa) - KANSAS - Found in several wheat and barley fields in south central and southeastern areas. Counts less than 1 per 1,000 heads. Reports of damaged grain expected over entire area at harvest, although large amount of damage not predicted. (Peters).

ARMYWORM (Pseudaletia unipuncta) - DELAWARE - Larvae fairly common in cornfield in New Castle County; causing feeding injury. (Burbutis, Mason). ILLINOIS - Abundant enough in Clinton County to warrant treatment in several small grain fields; however, populations light in eastern and western areas. (Ill. Ins. Rpt.). MISSOURI - Some damage to barley and grasses in pastures, with damage confined to heavy growth that had gone down. Counts in barley and grass ranged 0-6 larvae per square foot. (Munson, Thomas, Kyd).

BROWN WHEAT MITE (Petrobia latens) - UTAH - Common, sometimes damaging wheat in Tooele-Erda area of Tooele County; light on barley in Delta-Oasis area of Millard County; and very light in Beaver-Minersville area of Beaver County. (Knowlton). COLORADO - Counts in wheat 300 per 100 sweeps in Montrose County. (Colo. Ins. Sur.).

WHEAT CURL MITE (Aceria tulipae) - WASHINGTON - Early seeded winter wheat occasionally infested in eastern area. (Bruehl).

GREENBUG (Toxoptera graminum) - IOWA - Present in oats at Ames (averaged 1 adult female per linear foot). Yellow dwarf virus present in variety plots at Ames. (Iowa Ins. Inf., June 6). NEBRASKA - T. graminum, Rhopalosiphum fitchii and Macrosiphum granarium very low in small grains; T. graminum counts highest, with 8 per 10 sweeps in 2 fields. (Simpson). MINNESOTA - Present in Watonwan County. (Minn. Ins. Rpt.).

ENGLISH GRAIN APHID (Macrosiphum granarium) - DELAWARE - Present on young corn in Kent County. (Burbutis, Mason). NORTH DAKOTA - Counts average 0-2 per 50 sweeps in small grain in southeast area. (N. D. Ins. Sur.). WISCONSIN - Fair numbers present in oats in several scattered areas. (Wis. Coop. Sur.).

A BUG (Sehirus cinctus) - NORTH CAROLINA - Heavy infestation in oats in Cleveland County; injury not noticeable at this time. (Jones).

A CHINCH BUG (Blissus leucopterus insularis) - LOUISIANA - St. Augustine grass lawns being severely damaged throughout most of State. (Spink).

THRIPS (Chirothrips falsus and C. mexicanus) - ARIZONA - Ranged 2-4 per boot in some Bermuda grass seed fields in Yuma. (Ariz. Coop. Sur.).

AN ERIOPHYID MITE (Aceria n. sp.) - CALIFORNIA - First occurrence of this mite in field of commercial Bermuda grass in Westmorland area, Imperial County. Less than 5 percent of stand stunted. (V. Roth). ARIZONA - Found in Yuma on borders and edges of Bermuda grass seed fields; not developing into fields. Infesting many lawns in Maricopa, Yuma, Pinal and Pima Counties. (Ariz. Coop. Sur.).

MEADOW PLANT BUG (Leptopterna dolabratus) - MISSOURI - Heavy infestations observed in bluegrass throughout northern half of State; counts ranged 4-20 large nymphs and adults per sweep. (Munson, Thomas, Kyd).

KATYDIDS (Stieroxys spp.) - WASHINGTON - Infesting about 1,200 acres of range grassland in Benton County. (Chinn, Stewart).

A MIRID (Irbisia sp.) - MONTANA - Caused heavy damage to intermediate wheatgrass and less damage to crested and bluestem wheatgrass in Choteau County. (Roemhild, May 15-June 1).

WHITE-LINED SPHINX (Celerio lineata) - NEVADA - Infestation covering 15-20 square miles of rangeland present north of Nixon, Washoe County. Larvae of all instars averaged 15 per square yard in area of heaviest concentration and 2-5 in lighter areas. Some larvae migrated to croplands. At present not feeding on alfalfa or other crops, but consuming weeds such as dock, bassia and Russianthistle. (Bechtel, Martinelli, Parker).

THRIPS (undetermined) - DELAWARE - Very common to numerous in whorls of corn throughout State and in wheat in northern Sussex County. Another thrips present in soybeans in Kent County. (Burbutis, Mason). MARYLAND - Heavy numbers swept from alfalfa in Talbot and Dorchester Counties; light injury noted. Common on sweet corn and soybeans on Eastern Shore; moderate to heavy leaf streaking apparent. (U. Md., Ent. Dept.). GEORGIA - Some peanut fields in southern area with moderate infestations; most fields free of infestations. (Johnson). OKLAHOMA - Medium, 100 plus per square foot of crown area, in field of alfalfa in Tillman County. (Hatfield). UTAH - Moderate to numerous in some Beaver and Millard County alfalfa fields. (Knowlton).

MEADOW SPITTLEBUG (Philaenus leucophthalmus) - MASSACHUSETTS - Counts as high as 49 per 25 stems on alfalfa; rosetting of plants common throughout Berkshire County. (Tunis). DELAWARE - Adults abundant in field of clover in New Castle County; 20 per sweep. Adults present on alfalfa in New Castle and Kent Counties; nymphs present in Sussex County. (Burbutis, Mason). MARYLAND - Adults common in alfalfa and red clover in most sections. (U. Md., Ent. Dept.). INDIANA - Very heavy infestations on alfalfa and red clover in eastern counties. Counts in Randolph, Wayne, Fayette, Union, Franklin, Dearborn and Ripley Counties average 300 nymphs per 100 stems. Counts in northeastern counties of Adams, Wells, Allen, Whitley, De Kalb and Noble average 520 nymphs per 100 stems. Westward, infestations decline rapidly, infestations being unusually low in western counties. (Wilson). ILLINOIS - Adults ranged 0-1,600 per 100 sweeps in clover and alfalfa and nymphs ranged 0-40 per 100 stems in western area. (Ill. Ins. Rpt.). WISCONSIN - Averaged less than or about 2 nymphs per 10 alfalfa stems in Calumet, Brown, Manitowoc, Oconto, Washington, Waukesha, Winnebago, Waushara, Jefferson, Sheboygan and Kewaunee Counties; but 5 and 7 nymphs per 10 stems were respective averages for Outagamie and Marinette Counties. (Wis. Coop. Sur.).

THREE-CORNERED ALFALFA HOPPER (Spissistilus festinus) - GEORGIA - Infesting alfalfa in Morgan County, 20 per 100 sweeps. (Johnson). OKLAHOMA - Light, 0.1 per sweep, in field of alfalfa checked in Choctaw County. (Goin).

LYGUS BUGS (Lygus spp.) - NEVADA - Averaged 5-10 per sweep in alfalfa in Mason and Smith Valleys, Lyon and Churchill Counties (Parker), 15-25 per sweep in alfalfa in Panaca, Lincoln County (Lauderdale). ARIZONA - Counts 2-5 adults per sweep in alfalfa seed fields in Yuma County; many nymphs present. (Ariz. Coop. Sur.). NEW MEXICO - Averaged 40 adults and nymphs per 100 sweeps in alfalfa near Malaga, Eddy County. (N. M. Coop. Rpt.). UTAH - Numerous to very numerous in alfalfa in areas of Box Elder and Millard Counties, causing some white-bud injury to alfalfa in Delta-Sutherland area. (Knowlton, Thornley). WYOMING - Adults averaged 4 per 25 sweeps and nymphs 2 per sweep in alfalfa in Sheridan and Johnson Counties. Nymphs averaged less than 1 per sweep in each alfalfa field in Campbell County. (Fullerton). COLORADO - Counts 80-100 per 100 sweeps in Montrose County. (Colo. Ins. Sur.). OKLAHOMA - Counts averaged 0.5 per sweep in alfalfa checked in east

central area (Robinson); 5-15 per sweep in 2 fields of alfalfa and vetch in Choctaw County (Goin); and 5 per square foot of crown area in field of alfalfa in Tillman County (Hatfield).

TARNISHED PLANT BUG (Lygus lineolaris) - DELAWARE - Adults averaged 1 per sweep or slightly less in most alfalfa in State. (Burbutis, Mason). ILLINOIS - Adults ranged 0-60 per 100 sweeps and nymphs 40-200 per 100 sweeps in clover and alfalfa. (Ill. Ins. Rpt.). WISCONSIN - Adults averaged about 1 per 10 sweeps in alfalfa. (Wis. Coop. Sur.). NORTH DAKOTA - In southeast, counts average 1 adult per 20 sweeps and 1-15 nymphs per 10 sweeps. Nymphal populations appear higher than usual in area. (N. D. Ins. Sur.). NEBRASKA - Gradually building up in eastern counties in alfalfa; highest counts 2 per sweep. (Simpson).

RAPID PLANT BUG (Adelphocoris rapidus) - DELAWARE - Adults and nymphs remain present on alfalfa in most areas; numbers generally reduced. (Burbutis, Mason). ILLINOIS - Ranged 0-40 per 100 sweeps in clover and alfalfa. (Ill. Ins. Rpt.). NEBRASKA - Occasional specimen collected in alfalfa in east and northeast counties. (Simpson). WISCONSIN - Nymphs averaged about 1 per 10 sweeps in alfalfa. (Wis. Coop. Sur.).

ALFALFA PLANT BUG (Adelphocoris lineolatus) - ILLINOIS - Ranged 0-160 adults per 100 sweeps in clover and alfalfa. (Ill. Ins. Rpt.). NORTH DAKOTA - Nymphal counts range 1-4 per 10 sweeps in southeast. (N. D. Ins. Rpt.).

GARDEN FLEAHOPPER (Halticus bracteatus) - DELAWARE - Adults present in alfalfa in Kent County. (Burbutis, Mason). ILLINOIS - Adults ranged 0-40 per 100 sweeps in clover and alfalfa in western area. (Ill. Ins. Rpt.).

SAY STINK BUG (Chlorochroa sayi) - UTAH - Present, but light, in Millard and Beaver County fields; more numerous in field at Kanosh. More found about State than at same time in 1959. (Knowlton).

SIX-SPOTTED LEAFHOPPER (Macrosteles fascifrons) - NEBRASKA - Very low populations in small grains and grasses in northeastern counties. (Simpson). NORTH DAKOTA - Adults continue light in southeast and south central areas. Counts in small grains and legumes average 1 per 10 sweeps. (N. D. Ins. Sur.).

POTATO LEAFHOPPER (Empoasca fabae) - DELAWARE - Adults present to fairly common on soybeans in Kent County and present in alfalfa in Sussex County, with average of 2 per 10 sweeps. (Burbutis, Mason). MARYLAND - On Eastern Shore, adults increased slightly on alfalfa; averaging about 1 per sweep. (U. Md., Ent. Dept.). NORTH CAROLINA - Leafhoppers, believed to be this species, numerous on Bermuda grass lawns and biting man in Scotland County. (Alford). WISCONSIN - Averaged about 3 per 100 sweeps in some southern area alfalfa. (Wis. Coop. Sur.). NORTH DAKOTA - First adult of season collected June 7 at Oakes. (N. D. Ins. Sur.).

PEA APHID (Macrosiphum pisi) - OREGON - Populations in alfalfa in Klamath County less than 1 per sweep. During spring of 1959, this species was so abundant in this area that some plants were killed and growth of first cutting was retarded. Almost no predators observed. (Dickason). NEVADA - Averaged 15-20 per sweep in most alfalfa in Mason and Smith Valleys, Lyon County, and 10-30 per sweep in most fields in Churchill County. Few fields in Churchill County averaged 60-150 per sweep. (Parker). Averaged 10-20 per sweep in Panaca, Lincoln County, (first general increase this year); and 1-2 per sweep in Pahrump Valley, Nye County. (Lauderdale). UTAH - Generally light to moderate in west Millard County alfalfa and moderately numerous to numerous in alfalfa at Beaver and Minersville in Beaver County. (Knowlton). COLORADO - Counts in alfalfa 500-6,000 per 100 sweeps in Weld and Larimer Counties; 3,000 per 100 sweeps in Mesa County; and 200 per 100 sweeps in Delta County. (Colo. Ins. Sur.). WYOMING - Averaged 1 per sweep in 18 alfalfa fields checked in Campbell, Sheridan and Johnson Counties. (Fullerton). OKLAHOMA - Light, 20 per square foot, in field of sweetclover in Lincoln County (Stiles); counts ranged 10-75 per sweep in alfalfa checked in

Hughes, Okfuskee, Okmulgee and McIntosh Counties (Robinson); ranged 15-60 per sweep in 3 fields of vetch and alfalfa in Choctaw County (Goin); and 5 per sweep in field of alfalfa in Jefferson County (Vinson). NEBRASKA - First cutting alfalfa almost complete. Counts in uncut fields ranged 75-300 per 10 sweeps. Parasites very numerous in some fields in northeast. (Simpson). Counts in sweetclover remain at moderate levels, averaging 1,010 per 100 sweeps in Cass and Lancaster Counties. (Manglitz). NORTH DAKOTA - Populations in legumes increasing in southeast; counts ranged 1-10 per 10 sweeps. (N. D. Ins. Sur.). MINNESOTA - Generally low; counts ranged 0-25 per 10 sweeps in central, west central, southwest and northwest districts. (Minn. Ins. Rpt.). WISCONSIN - Counts as high as 28 per sweep in alfalfa in Calumet County and about 10 per sweep in Columbia, Outagamie, Kewaunee and Sheboygan Counties. Low counts were in Manitowoc and Brown Counties; 3-5 per sweep. In clover, counts of 2.5 and 4 per sweep recorded in Sheboygan and Outagamie Counties, respectively. (Wis. Coop. Sur.). ILLINOIS - Populations varied 200-8,000 per 100 sweeps in clover and alfalfa. (Ill. Ins. Rpt.). MARYLAND - Not a problem on second-growth alfalfa in central and southern sections. (U. Md., Ent. Dept.). DELAWARE - Present in alfalfa, clover and peas throughout State; not heavy enough to cause serious injury. (Burbutis, Mason).

SPOTTED ALFALFA APHID (Therioaphis maculata) - NEVADA - None found in Panaca, Lincoln County (Lauderdale) or Lyon County (Parker). UTAH - Rare in west Millard County alfalfa. (Knowlton) OKLAHOMA - Light, 2-10 per sweep, in 2 fields of alfalfa in Choctaw County (Goin); medium, 250 per sweep, in alfalfafield in Jefferson County (Vinson). Light, 40 per square foot, in field of alfalfa in Tillman County. (Hatfield).

YELLOW CLOVER APHID (Therioaphis trifolii) - ILLINOIS - Ranged 0-40 per 100 sweeps. (Ill. Ins. Rpt.).

SWEETCLOVER APHID (Therioaphis riehmi) - NEBRASKA - Counts average 10 per 100 sweeps in Lancaster and Cass Counties in sweetclover. (Manglitz).

COWPEA APHID (Aphis medicaginis) - NEW MEXICO - Moderate to heavy on alfalfa in Malaga area of Eddy County. (N. M. Coop. Rpt.).

ALFALFA WEEVIL (Hypera postica) - NEVADA - Averaged 30-35 per sweep in Panaca, Lincoln County (Lauderdale); 4-6 per sweep in some fields in Smith Valley, Lyon County, and 15-20 per sweep in several fields in Mason Valley, Lyon County; 5-10 per sweep in some fields in Fallon, Churchill County; and 40-60 per sweep in field in Stillwater, Churchill County (Parker). UTAH - Damage becoming noticeable in some Box Elder, Weber, Davis and Salt Lake County untreated fields in northern area; and in Delta and Leamington in Millard County. Damaging in many Beaver, Millard and Iron County fields. Several thousand acres treated during past week in Milford, Beryl and Minersville areas. (Knowlton). WYOMING - Adults averaged 5 per 25 sweeps and larvae averaged 1 per sweep in 18 alfalfa fields checked in Campbell, Sheridan and Johnson Counties. (Fullerton). COLORADO - Larval counts 100-800 per 100 sweeps in alfalfa in Larimer and Weld Counties; 2,000 per 100 sweeps (20 percent parasitized) in untreated fields in Mesa County, with counts 10-50 per 100 sweep (75 percent parasitized) in fields where early controls applied; 2,000 per 100 sweeps in Delta County; and 200 per 100 sweeps in Montrose County. (Colo. Ins. Sur.). NEBRASKA - Pupating larvae collected 5 miles southwest of Lexington in Dawson County; a new county record. (Stevens). NEW YORK - Larvae averaged 200 per sweep in field of alfalfa at Brewster. Whitening of foliage taking place. (N. Y. Wkly. Rpt.). MASSACHUSETTS - Larval counts in southern Berkshire County as high as 38 per 100 sweeps. (Tunis). MARYLAND - Heavy injury to second-growth alfalfa in Kent County. Light to moderate on second-growth alfalfa on lower Eastern Shore. (U. Md., Ent. Dept.). DELAWARE - Larvae averaged 1-4 per sweep in second-growth alfalfa; one field in New Castle and one in Kent County averaged 8-10 larvae per sweep. Adults remain present most areas. (Burbutis, Mason).

CLOVER LEAF WEEVIL (Hypera punctata) - KANSAS - Few adults collected in Sedgwick and Elk Counties; counts less than 1 per sweep. (Peters).

LESSER CLOVER LEAF WEEVIL (Hypera nigrirostris) - DELAWARE - New adults very common; 2 per sweep in field of clover in New Castle County. (Burbutis, Mason). OHIO - First emergence of new adults observed on June 2 in insectary in Wayne County. (Sechriest). ILLINOIS - Larvae in western area infested 50-60 percent of red clover stems. (Ill. Ins. Rpt.).

CLOVER SEED WEEVIL (Miccotrogus picrostris) - ILLINOIS - Collected in Henry County for first time. (Ill. Ins. Rpt.). WISCONSIN - Averaged 1 per 10 sweeps in Sheboygan County clover. (Wis. Coop. Sur.) IDAHO - Adult migration into alsike and white clover has commenced. Populations in clover fields average up to 2 per 10 sweeps. (Futter, Portman).

A CLOVER WEEVIL (Tychius stephensi) - ILLINOIS - Collected in Bureau County for first time. (Ill. Ins. Rpt.).

CLOVER ROOT CURCULIO (Sitona hispidula) - KANSAS - Larvae causing damage to regrowth after first cutting of alfalfa in Leavenworth County. (Gates). Few adults collected in Sumner and Sedgwick Counties; damage not apparent. (Peters).

CURCULIOS (Sitona spp.) - OHIO - Found damaging new seeding of clover and alfalfa in Auglaize County on June 1. Some leaf feeding observed on established alfalfa nearby. (Blair).

VETCH BRUCHID (Bruchus brachialis) - NEBRASKA - Infestations found in vetch in Antelope County. Det. by P. J. Spangler. A new record for the State. (Roselle).

ALFALFA CATERPILLAR (Colias philodice eurytheme) - DELAWARE - Larvae present in alfalfa in Sussex County; averaging 1 per 10 sweeps. (Burbutis, Mason). ILLINOIS - Larvae averaged 1-5 per 100 sweeps in clover and alfalfa in western area. (Ill. Ins. Rpt.). OKLAHOMA - Occasional to light in alfalfa in east central and south central areas. (Robinson, Vinson). KANSAS - Larvae collected in several fields of alfalfa in south central and southeastern areas; counts less than 1 per sweep. (Peters). WYOMING - Numerous adults flying in alfalfa fields in Campbell, Sheridan and Johnson Counties. No larvae found. (Fullerton).

FORAGE LOOPER (Caenurgina erechtea) - KANSAS - Collected in several fields of alfalfa in southeast; counts averaged less than 1 per sweep. (Peters).

GREEN CLOVERWORM (Plathypena scabra) - OKLAHOMA - Light in alfalfa checked in east central and southeastern areas. (Robinson, Goin). KANSAS - Observed in few alfalfa fields in south central and southeastern areas; counts less than 1 per sweep. (Peters). ILLINOIS - Varied 0-40 per 100 sweeps in clover and alfalfa. (Ill. Ins. Rpt.). MARYLAND - Light numbers of small larvae taken by sweeping second-growth alfalfa in Dorchester County. (U. Md., Ent. Dept.).

WEBWORMS (Loxostege spp.) - KANSAS - Collected in field of alfalfa in Elk County; less than 1 per sweep. (Peters). COLORADO - Larvae of L. commixtalis feeding on seedling alfalfa in Crowley County. (Colo. Ins. Sur.). NEBRASKA - L. sticticalis increasing in western portion of State; some control underway. (Simpson).

PALE-STRIPED FLEA BEETLE (Systema blanda) - DELAWARE - Adults present in soybeans and alfalfa in Kent County. (Burbutis, Mason). MARYLAND - Adults averaged 2 per sweep on second-growth red clover at Bushwood, St. Marys County. (U. Md., Ent. Dept.).

MEXICAN BEAN BEETLE (Epilachna varivestis) - SOUTH CAROLINA - Adults numerous but doing little damage to soybeans in Lee County. (Nettles et al.). MARYLAND - Moderate foliage injury from adult feeding noted in large soybean field in Dorchester County. (U. Md., Ent. Dept.).

BEAN LEAF BEETLE (Cerotoma trifurcata) - DELAWARE - Adults gradually becoming more numerous on soybeans in most areas, with heaviest infestation in Kent County. (Burbutis, Mason). MARYLAND - Light to moderate foliage injury noticeable on young soybeans on Eastern Shore. (U. Md., Ent. Dept.). ILLINOIS - Adults varied 0.5-3 per linear foot of row in soybeans in east-southeast section, with 100 percent of plants showing feeding in some fields. Two fields, with 25 percent loss of foliage, treated. (Ill. Ins. Rpt.). IOWA - Damage to soybeans reported in Woodbury County. (Iowa Ins. Inf., June 6).

A SPRINGTAIL (Entomobrya nivalis) - CALIFORNIA - Heavy infestation on flax in Brawley, Imperial County. (Cal. Coop. Rpt.).

FRUIT INSECTS

CODLING MOTH (Carpocapsa pomonella) - INDIANA - Packing house emergence from apples at Orleans totaled 366 for the period June 1-7, indicating peak emergence is at hand or past. Heavy hatch also indicated for June 12-17. New larval entries easily found in the orchard. (Marshall, June 7). Fruit entries present but generally very scarce in sprayed orchards at Vincennes. (Cleveland, June 6). NEW YORK - One adult was collected in bait traps June 1, the day traps were put out in Niagara County; 14 more were taken in 4 traps on nights of June 2 and 3. None have appeared in traps located in the lake zone. Began emerging in Monroe County June 1 at Spencerport. (N. Y. Wkly. Rpt.). MISSOURI - Light infestations of very small larvae appearing in all sections on apples. Most larvae half-grown or more in southeast section. (Wkly. Rpt. Fr. Gr.). OHIO - First larva noted entering apple in Marietta area, Washington County, on June 4. (Stacy). MASSACHUSETTS - This is the next pest of major concern to apple growers. Egg laying has already begun and warm evenings will bring about an increase in egg laying and hatching during next 3-4 weeks. (Crop Pest Cont. Mess.). OREGON - Eggs observed on untreated pear trees in Medford May 25; egg hatching common on June 7; one larva noted entering fruit June 2. (Berry, Gentner).

RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) - NEW YORK - On June 3, eggs were 100 percent hatched in all but lakeside orchards in western part of State. Marked egg masses were 97 percent hatched in an orchard about one-quarter mile from Lake Ontario. Moth emergence in 5 cages at Geneva has been as follows: May 23 - 3; May 25 - 2; May 27 - 5; May 30 - 28; June 1 - 6; June 6 - 18. Indications are that a few eggs will be hatching June 10-15, particularly in problem orchards. Larvae are difficult to control in 4 orchards in Newburgh area, Orange County. (N. Y. Wkly. Rpt., June 6). MISSOURI - Remains plentiful, especially in northwest, although most are pupating. In central area, pupae taken into laboratory June 2 yielded adults June 8. Therefore, next brood will be present in about 7-10 days. (Wkly. Rpt. Fr. Gr.).

PLUM CURCULIO (Conotrachelus nenuphar) - NEW YORK - Fresh egg laying has been noted in Orange County. Some injury appearing in Orleans County, where timing of controls was poor. Cutting heavy in some sweet cherry and prune orchards in Monroe County. (N. Y. Wkly. Rpt., June 6). GEORGIA - Emergence of new adults from soil expected to start during week June 12-18 at Ft. Valley. Though these new beetles will not deposit second-generation eggs in peaches until latter part of June or early July, they will feed freely on peaches and resulting feeding punctures will facilitate entrance and growth of brown rot. (Snapp). SOUTH CAROLINA - Untreated plum trees in Kershaw County almost 100 percent infested on June 1; apparently none of larvae had left fruit to enter soil. (Nettles et al.).

ROSY APPLE APHID (Anuraphis roseus) - INDIANA - Has subsided for the season in the Orleans area, after having caused considerable damage. (Marshall, June 7). Some infestations still present at Vincennes but appear to be declining rapidly. (Cleveland, June 6). NEW JERSEY - More numerous on apples than for several years. (Ins.-Dis. Newsl., June 7). NEW YORK - Quite evident on untreated trees in Niagara County, with considerable rolling of leaves on terminal growth. (N. Y. Wkly. Rpt., June 6). OHIO - Common and damaging apple foliage in southern section of State as of June 6. (Holdsworth).

APPLE APHID (Aphis pomi) - NEW JERSEY - Migration on apples is increasing. (Ins.-Dis. Newsl., June 7).

FORBES SCALE (Aspidiotus forbesi) - MISSOURI - Few crawlers present June 8 in southeast area, indicating appearance to be a little later than usual. (Wkly. Rpt. Fr. Gr.).

BUFFALO TREEHOPPER (Stictocephala bupalus) - NEW YORK - Severe damage and infestation on young apple and peach trees in Monroe County. (N. Y. Wkly. Rpt., June 6).

EUROPEAN RED MITE (Panonychus ulmi) - INDIANA - Excellent control being maintained in most treated orchards at Vincennes. Counts per 100 leaves in an untreated orchard were 1,520 adults, 1,100 nymphs and 15,780 eggs. (Cleveland, June 6). MISSOURI - Reports from northwest indicate presence in most orchards, although most infestations are light; average about 1 per leaf. (Wkly. Rpt. Fr. Gr.).

TWO-SPOTTED SPIDER MITE (Tetranychus telarius) - INDIANA - Appearing to a very limited degree in some blocks in Vincennes area. Counts per 100 leaves in an untreated orchard were 0 adults, 40 nymphs and 140 eggs. (Cleveland, June 6). NEW MEXICO - Light and spotty in one orchard in Dona Ana County. (N. M. Coop. Rpt.).

PEAR PSYLLA (Psylla pyricola) - WASHINGTON - Severely damaging pears along Snake River, Whitman County. (Telford).

GREEN PEACH APHID (Myzus persicae) - IDAHO - Developing rapidly on peach trees in Power, Bingham and Bonneville Counties. Light infestations, mostly stem mothers, observed on apricot trees in Butte and Custer Counties. (Bishop).

MEALY PLUM APHID (Hyalopterus arundinis) - NEW MEXICO - Heavy on new growth of apricot trees in Las Cruces, Dona Ana County. (N. M. Coop. Rpt.).

BLACK CHERRY APHID (Myzus cerasi) - OHIO - Curled leaves appearing on sweet cherries at Wooster, Wayne County, on June 1. (Rings). UTAH - Infestations spotty, causing only local injury at Brigham and Kaysville in northern part of State. (Knowlton).

CATFACING INSECTS - INDIANA - Stink bugs have caused considerable damage to peaches in the Orleans area; there is reason to believe that where they have been severe they will continue. (Marshall, June 7).

A PLANT BUG (Neolygus omnivagus) - OHIO - Exceedingly abundant in Wooster area, Wayne County, and causing much damage to treated and untreated peaches June 3. (Rings).

WESTERN CHERRY FRUIT FLY (Rhagoletis cingulata indifferens) - OREGON - First adults of season emerged in Jackson County on May 24 and in Hood River County on June 2. (Berry, Ellertson).

CHERRY MAGGOT (Rhagoletis cingulata) - NEW YORK - Adults emerged in Spencerport area of Monroe County June 1 in seeded cages; also began emerging on same date in Wayne County. (N. Y. Wkly. Rpt., June 6).

BLACK CHERRY FRUIT FLY (Rhagoletis fausta) - NEW YORK - First emergence occurred at Geneva on June 1 and has been steady and heavy since that date. (N. Y. Wkly. Rpt., June 6).

PECAN NUT CASEBEARER (Acrobasis caryae) - LOUISIANA - Heavy infestations noted on pecans in Lake Charles area, Calcasieu Parish. (Spink). NEW MEXICO - Damaging new nut clusters in Carlsbad, Eddy County. (N. M. Coop. Rpt.). TEXAS - In Sterling County, first eggs found May 23 and first larva May 29. Insecticide applications have been completed in the major commercial areas. (Texas Coop. Rpt.). GEORGIA - Light to moderate infestations on pecans in Bibb, Houston, Colquitt and Mitchell Counties. (Johnson). OKLAHOMA - Counts averaged 12 percent larval infestation and 20 percent egg infestation in nut clusters checked on native pecan trees in Jefferson County. (Vinson).

WALNUT CATERPILLAR (Datana integerrima) - TEXAS - Isolated infestations of small larvae observed on pecans in Sterling County. Very small to half-grown larvae reported on pecan trees in home lawns in Gonzales County, with none observed in commercial orchards. (Texas Coop. Rpt.).

CANKERWORMS - NEW YORK - Paleacrita vernata and Alsophila pometaria are abundant in some untreated trees in Niagara County, with walnut trees showing complete defoliation in one instance. Young nonbearing blocks of sour cherries in Orleans County show severe injury from cankerworms. (N. Y. Wkly. Rpt., June 6).

A WEBWORM - TEXAS - Heavy infestations of an unspecified species on pecans, walnuts and other trees in Walker, San Jacinto and Polk Counties. (Henderson).

PECAN PHYLLOXERA (Phylloxera devastatrix) - OKLAHOMA - Continues to cause concern throughout the east central area of the State. (Howell).

EUROPEAN FRUIT LECANIUM (Lecanium corni complex) - OKLAHOMA - Heavy on some pecan trees checked in the Stillwater area of Payne County. (Walton).

WALNUT BLISTER MITE (Aceria erinea) - WASHINGTON - Damaging walnuts at Clarkston, Asotin County. (Telford).

Citrus Insect Situation in Florida - End of May - PURPLE SCALE (Lepidosaphes beckii) activity and populations will remain low during the summer in all districts. A few groves will have moderate to heavy infestations and will most likely be in the Ridge and Indian River districts. FLORIDA RED SCALE (Chrysomphalus aonidum) activity will continue high through June. Populations are currently below average in most districts but generally will increase during next 6 weeks. Although many groves will develop moderate to heavy infestations by the end of June, summer peak in July is expected to be below average of previous years. Highest activity is in the Bartow, upper east coast, Indian River and Ridge districts. Activity of CITRUS RED MITE (Panonychus citri) is below normal for this time of year; however, increases are expected in most districts during June. Summer peak will occur in late June, and be slightly below average of previous years. Highest activity is in the Gainesville, Orlando,

Bartow and Indian River districts. CITRUS RUST MITE (Phyllocoptruta oleivora) activity is low at present, but will trend upward during June. Populations will increase markedly on June, much more on fruit than on leaves. Infestations are spotty, with highest activity in the Bartow and west coast districts. TEXAS CITRUS MITE (Eotetranychus banksi) will become increasing abundant during June. Moderate to heavy infestations are present in 9 percent of the groves. CHAFF SCALE (Parlatoria pergandii) is present in 60 percent of the groves and is more abundant than usual. (Simanton, Thompson, Johnson, (Citrus Exp. Sta., Lake Alfred)).

ROSE CHAFER (Macrodactylus subspinosus) - MASSACHUSETTS - Attacking grapes. (Crop Pest Cont. Mess.).

GRAPE FLEA BEETLE (Altica chalybea) - NEW YORK - Larvae feeding in some vineyards in Chautauqua County. (N. Y. Wkly. Rpt., June 6).

A CURCULIONID - INDIANA - An undertermined species has been attacking grapes in increasing numbers in the Orleans area during the past 10 days. Inquiries have been received from several scattered southern sections. (Marshall, June 7).

A GALL MIDGE (Itonida viticola) - NORTH CAROLINA - Local infestation on a few grape leaves in Montgomery County. (Wesson, Farrier).

CURRANT STEM GIRDLER (Janus integer) - NEW YORK - Damage apparent in 4 currant plantings examined June 3 and 6 in Chautauqua County. (N. Y. Wkly. Rpt., June 6).

FRUIT TREE LEAF ROLLER (Archips argyrospila) - NEW JERSEY - A leaf roller, tentatively identified as this species, has caused minor foliage injury to apples over much of the central and northern sections of the State. (Ins.-Dis. Newsl., June 7). MISSOURI - Heavy flights of adults taken in light traps in Columbia, Boone County. (Wingo).

ORIENTAL FRUIT MOTH (Grapholitha molesta) - INDIANA - Emergence from apples in packing houses at Orleans is practically over and totaled 19 for period June 1-7. The attack on peaches was light during the first generation. (Marshall, June 7). Adults again appearing in bait traps at Vincennes. (Cleveland, June 6). NEW YORK - Adults appeared in bait traps the night of June 3 in Niagara County. (N.Y. Wkly. Rpt., June 6). OHIO - First-generation damage to peach terminals easily found in southern area by June 6. (Holdsworth).

TRUCK CROP INSECTS

Second Statement of Beet Leafhopper Conditions for Southern Idaho - 1960

Because of variable weather conditions, development of spring generation was retarded. Although very few adults found, all stages of development present during week ending May 14. Nymphal populations on that date averaged 2.8 per square foot. Host plants in sagebrush areas still in good condition for maturing nymphs. Saylor Creek area contains highest population of nymphs, although surveys indicate that cold, wet weather has reduced potential from this area. Due to unfavorable weather conditions, movement into cultivated crops expected to start about one week later than in 1959 or about June 1. Movement into Gooding, Jerome, Lincoln, Minidoka and Cassia Counties should be slightly less than in 1959. Movement into cultivated crops expected to be heavier in western Twin Falls County as a result of populations found in southern Saylor Creek area. With normal weather conditions, peak of movement should occur last week in June. The spring nymphal survey indicates that chemical control would not be practical. Host numbers and nymphal populations are below normal in area where chemical control is usually done. Tests completed this spring indicate that an average of 15.5 percent of overwintering beet leafhoppers in southern Idaho and eastern Oregon were carrying the curly top virus.

This is higher than usual. Infective leafhoppers from the Minidoka area were lowest with 7.4 percent and were highest from the Twin Falls East section with 21.4 percent, while 18 percent from western Idaho-eastern Oregon were carrying the virus. (Portman).

BEET LEAFHOPPER (Circulifer tenellus) - UTAH - Three to 7 per 20 sweeps on Atriplex rosea and 2-4 on halogeton in Delta area. (Knowlton).

BEET WEBWORM (Loxostege sticticalis) - COLORADO - Second and third-instar larvae, 3-5 per 10 sugar beet plants, and eggs 0-5 in Larimer, Weld and Adams Counties. (Colo. Coop. Sur.). MONTANA - Adults very abundant in northeastern part of State May 15 - June 1. This is about 2-3 weeks earlier than usual. (Roemhild). WYOMING - Small numbers of adults present in alfalfa fields in Sheridan and Johnson Counties. (Fullerton). NEBRASKA - Populations in western portion of the State increasing; some control underway. (Simpson). NORTH DAKOTA - Moth flights observed in most areas of State. (N. D. Ins. Rpt.).

SUGAR-BEET ROOT APHID (Pemphigus betae) - WASHINGTON - Spring alates in flight in Walla Walla area. (Woodworth).

COLORADO POTATO BEETLE (Leptinotarsa decemlineata) - NEW YORK - Damage to tomato plants noted on June 3 in Chautauqua County; egg clusters also present. First larvae hatching on potato plants on North Fork of Long Island June 1-2. Egg masses numerous. (N. Y. Wkly. Rpt.). NEW JERSEY - Very active at present. Apparently worse in 1960 than in 1958 or 1959. (Ins.-Dis. Newsl., June 7). DELAWARE - Adults present and larvae very common in field of potatoes in Kent County, causing moderately heavy injury. Adults present and larvae very common in field of tomatoes in Sussex County, causing noticeable feeding injury. (Burbutis, Mason). MARYLAND - Heavy injury to 3-acre field of potatoes locally in Dorchester County. (U. Md., Ent. Dept.). NORTH CAROLINA - Very light infestation in gardens in Wayne County this spring; little if any losses noted. Many on potatoes in Henderson County. (Chalfant). IDAHO - Adults present. (Bishop).

CUTWORMS - NEW JERSEY - Have caused local damage to peppers. (Ins.-Dis. Newsl., June 7). NEW YORK - Caused some damage to tomatoes in Chautauqua County. (N. Y. Wkly. Rpt., June 6). NEVADA - Light to medium on onions in some fields in Lyon and Washoe Counties. (Batchelder, Gardella).

EUROPEAN CORN BORER (Pyrausta nubilalis) - NEW JERSEY - Activity in potatoes increased. (Ins.-Dis., Newsl., June 7).

HORNWORMS (Protoparce spp.) - DELAWARE - Eggs found on peppers and potatoes in Sussex County. (Burbutis, Mason).

TOMATO FRUITWORM (Heliothis zea) - GEORGIA - Light to moderate infestations on tomatoes in Tift, Colquitt and Mitchell Counties. (Johnson). SOUTH CAROLINA - Doing limited damage. (Nettles et al.).

TOMATO PINWORM (Keiferia lycopersicella) - CALIFORNIA - Light in tomato fruit in Brawley, Imperial County. (Cal. Coop. Rpt.).

POTATO STALK BORER (Trichobaris trinotata) - MARYLAND - Adults common on jimsonweed at several localities in Dorchester County. (U. Md., Ent. Dept.).

POTATO FLEA BEETLE (Epitrix cucumeris) - DELAWARE - Adults fairly common, with light feeding injury on lima beans in southern New Castle County, and continue present on potatoes in most areas of the State. Also present on peppers, tomatoes and cucumbers in Sussex County. (Burbutis, Mason). WISCONSIN - Fair numbers on potatoes in a few counties. (Wis. Coop. Sur.). NORTH DAKOTA - Moderate to severe feeding injury in home gardens in southeast section. (N. D. Ins. Sur.). INDIANA - Abundant on potatoes and peppers in Knox County. (Gould).

WESTERN POTATO FLEA BEETLE (Epitrix subcrinita) - IDAHO - Adults appearing on early planted potatoes in Bingham and Bonneville Counties. Numbers appear to be higher than during the past three years. (Bishop).

FLEA BEETLES - NEW YORK - Very plentiful on tomatoes and eggplant in Nassau County; numerous on transplanted vegetables in Onondaga County; damaged tomato plantings in Chautauqua County; and present in some potato fields in Suffolk County. (N. Y. Wkly. Rpt., June 6). MARYLAND - Epitrix sp. less abundant on potatoes and tomatoes than in previous weeks. Eggplant in Montgomery and Kent Counties has been injured severely. (U. Md., Ent. Dept.). WYOMING - Adults averaged 10 per 100 plants in 6 sugar beet fields checked in Sheridan County. (Fullerton).

WIREWORMS - MONTANA - Damaging potatoes in Pondera County. (Roemhild, May 15-June 1).

LEAF MINERS - SOUTH CAROLINA - Abundant and difficult to control in some tomato plantings in Charleston area. (Reid, June 2).

GARDEN FLEAHOPPER (Halticus bracteatus) - DELAWARE - Adults present in potatoes and beans in New Castle and Kent Counties, causing very light feeding injury. (Burbutis, Mason).

WHITEFLIES - DELAWARE - An undetermined species present on tomatoes in New Castle County and on potatoes in New Castle and Kent Counties. (Burbutis, Mason).

POTATO LEAFHOPPER (Empoasca fabae) - DELAWARE - Adults present on young lima beans in New Castle County, snap beans in Sussex County and potatoes in Kent County. (Burbutis, Mason). INDIANA - Populations light in Knox County. (Gould). NORTH DAKOTA - First adult collected June 7. (N. D. Ins. Sur.).

POTATO PSYLLID (Paratrioza cockerelli) - COLORADO - Adult counts 1-2 per 100 sweeps on early potatoes (some in bloom stage) in Milliken, Platteville area, Weld County. On matrimonyvine, adults 10-30 per 100 sweeps; eggs present but no nymphs observed in Weld County. (Colo. Ins. Sur.).

GREEN PEACH APHID (Myzus persicae) - DELAWARE - Fairly common in one field of horseradish in central Kent County. (Burbutis, Mason). NEW JERSEY - Generally present in small numbers on potato plantings throughout State. (Ins.-Dis. Newsl., June 7).

POTATO APHID (Macrosiphum solanifolii) - SOUTH CAROLINA - Light on potato and tomato throughout May in Charleston area, but of little economic importance. (Reid, June 2). MARYLAND - Generally light to moderate on commercial and home tomato plantings on Eastern Shore. (U. Md., Ent. Dept.).

PEA APHID (Macrosiphum pisi) - WISCONSIN - About a tenfold increase over last week in Columbia County, averaging 14 per sweep in 10-inch peas. While increase was noted in southern area, the situation was different in northern areas. June 3 - 1 per 100 6-inch plants in Outagamie County; 4 per 100 1-inch plants in Calumet County; 1 per 150 4-inch plants in Kewaunee County. In Sheboygan County, counts were as follows: 2-inch peas, 1 per 50 plants; 6-inch peas, 2 per 10 plants; and 8-10-inch peas, 11 per 10 sweeps. (Wis. Coop. Sur.). UTAH - Common in northern area peas; population threatening. (Knowlton).

MEXICAN BEAN BEETLE (Epilachna varivestis) - GEORGIA - Heavy infestations on beans in Colquitt and Mitchell Counties. (Johnson). SOUTH CAROLINA - Light to moderate in some plantings of snap beans in Charleston area. (Reid, June 2). NORTH CAROLINA - Extremely light in Wayne County this season; 6 to 8 found in some fields in Pender and Duplin Counties. (Farrier, Fedoronko). MARYLAND - Heavy on snap beans in home gardens locally in St. Marys County. (U. Md., Ent. Dept.). DELAWARE - Adults present on beans throughout State. (Burbutis, Mason).

BEAN LEAF BEETLE (Cerotoma trifurcata) - NORTH CAROLINA - Causing minor injury; 5-10 per 20 feet of row on snap beans in Henderson County on May 20. (Chalfant). MARYLAND - Adults continue to injure snap bean foliage in all sections. (U. Md., Ent. Dept.). DELAWARE - Adults present on snap beans in Sussex County; causing light feeding injury. (Burbutis, Mason).

SEED-CORN MAGGOT (Hylemya cilicrura) - OREGON - Causing damage to bean plantings in Willamette Valley during late spring. Prolonged cool, damp weather has favored maggot injury. (Capizzi).

SPIDER MITES - ARIZONA - Tetranychus sp. infesting a few melons in Yuma County. (Ariz. Coop. Sur.). MARYLAND - Infesting snap beans locally in St. Marys County. (U. Md., Ent. Dept.).

IMPORTED CABBAGEWORM (Pieris rapae) - SOUTH CAROLINA - Populations on late spring cabbage lower than usual in Charleston area, averaged about 1 larva per plant on untreated plots by end of commercial harvest in late May. (Reid, June 2). DELAWARE - Eggs numerous on leaves of horseradish in Kent County. (Burbutis, Mason). NEW YORK - Eggs present in most fields of cabbage in Onondaga County. (N. Y. Wkly. Rpt., June 6).

DIAMONDBACK MOTH (Plutella maculipennis) - SOUTH CAROLINA - Populations lower than usual on late spring cabbage in Charleston area; averaged less than one larva per plant in untreated plots by the end of harvest in late May. (Reid, June 2). DELAWARE - Larvae present in one field of horseradish in Kent County, causing light feeding injury. (Burbutis, Mason). MISSOURI - Quite troublesome on cole crops, especially cabbage in southeastern area; most in pupal stage at present. (Wkly. Rpt. Fr. Gr.) COLORADO - Larval damage noted on 2-3 plants per 10 cabbage plants. (Colo. Coop. Sur.).

CABBAGE LOOPER (Trichoplusia ni) - SOUTH CAROLINA - Populations on late spring cabbage developed slower than usual in Charleston area; averaged 4 larvae per plant in untreated plots by end of May when harvest was nearly complete. Feeding on tomato foliage the last week of May. (Reid, June 2).

LEAFHOPPERS - NEW YORK - Common in Nassau County and a few on lettuce in Orange and Steuben Counties. (N. Y. Wkly. Rpt., June 6). LOUISIANA - Empoasca sp. averaged 71 per 100 sweeps on sweetpotatovines in St. Landry Parish. (Spink).

SQUASH BEETLE (Epilachna borealis) - LOUISIANA - Infestations general in Catahoula and West Carroll Parishes on beans, squash and cucumbers in gardens. (Spink). NORTH CAROLINA - Has destroyed up to 5 percent of the foliage of cucumbers in one garden in Wayne County. (Farrier).

STRIPED CUCUMBER BEETLE (Acalymma vittata) - NEW YORK - Numerous in transplanted vegetables in Onondaga County. (N. Y. Wkly. Rpt., June 6). DELAWARE - Adults fairly common in New Castle County and numerous in Sussex County cucumber fields. (Burbutis, Mason). LOUISIANA - Infestation general in Catahoula and West Carroll Parishes on beans, squash and cucumbers in gardens. (Spink). MISSOURI - Have been very troublesome on cucurbits just sprouting in southeast area. (Wkly. Rpt. Fr. Gr.). SOUTH DAKOTA - On cucurbits in Brookings, Brookings County. (Mast).

SPOTTED CUCUMBER BEETLE (Diabrotica undecimpunctata howardi) - DELAWARE - Adults present on tomatoes in New Castle and Kent Counties, and on watermelons in Sussex County. (Burbutis, Mason).

MELON APHID (Aphis gossypii) - OKLAHOMA - Light, 50 per 100 leaves, on watermelons in Jefferson County. (Vinson).

SQUASH BUGS (Anasa spp.) - OKLAHOMA - A. tristis light, 2 per 100 leaves, on watermelons in Jefferson County. (Vinson). DELAWARE - A. armigera adults fairly common in field of cucumbers and field of watermelons in Sussex County. (Burbutis, Mason).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - OKLAHOMA - Light to medium on melon and sweetpotatovines at Perkins. (Morrison).

SWEETPOTATO FLEA BEETLE (Chaetocnema confinis) - LOUISIANA - Averaged 135 per 100 sweeps on sweetpotatovines in St. Landry Parish. (Spink).

ONION MAGGOT (Hylemya antiqua) - NEW YORK - Continues to infest onions in Orange County. (N. Y. Wkly. Rpt., June 6).

ONION THRIPS (Thrips tabaci) - COLORADO - Ten-50 per onion plant, 4-6 leaves per plant, in Weld and Adams Counties. (Colo. Coop. Sur.).

ASPARAGUS BEETLES (Crioceris spp.) - MARYLAND - Crioceris asparagi and C. duodecimpunctata abundant and laying eggs on asparagus ferns at several localities in St. Marys and Prince Georges Counties. (U. Md., Ent. Dept.).

WESTERN BLACK FLEA BEETLE (Phyllotreta pusilla) - UTAH - Still numerous on vegetable crops in Box Elder and Cache Counties. Damaging radishes and beets and extremely numerous on some tansymustards in Delta-Sutherland area of Millard County. (Knowlton, Thornley).

STRAWBERRY LEAF ROLLER (Ancyliis comptana fragariae) - NEW JERSEY - Very numerous on young plantings of strawberries in Cumberland County. (Ins.-Dis. Newsl., June 7).

STRAWBERRY SAWFLY (Empria ignota) - MINNESOTA - Reported in the Twin City area on strawberry foliage. (Minn. Ins. Rpt.).

TOBACCO INSECTS

HORNWORMS (Protoparce spp.) - MARYLAND - Eggs and small larvae light on early planted tobacco in St. Marys and Calvert Counties. First of season. (U. Md., Ent. Dept.). GEORGIA - Light on tobacco in Colquitt and Mitchell Counties. (Johnson).

TOBACCO BUDWORM (Heliothis virescens) - GEORGIA - Light to moderate on tobacco in Colquitt, Thomas and Mitchell Counties. (Johnson).

TOBACCO FLEA BEETLE (Epitrix hirtipennis) - MARYLAND - Populations of overwintering brood have dropped off slightly on tobacco in St. Marys, Calvert and Charles Counties. Expect new brood about July 1. (U. Md., Ent. Dept.).

GREEN PEACH APHID (Myzus persicae) - MARYLAND - Light on tobacco in some fields observed in Calvert and St. Marys Counties. (U. Md., Ent. Dept.).

SOUTHERN GREEN STINK BUG (Nezara viridula) - GEORGIA - Light on tobacco in Colquitt and Mitchell Counties. (Johnson).

SEED-CORN MAGGOT (Hylemya cilicrura) - MASSACHUSETTS - Caused severe damage to newly set shade tobacco in Hampshire County in late May. Approximately 100 acres harrowed in and reset. Most shade fields had to be restocked 3 or 4 times. (Tunis).

COTTON INSECTS

BOLL WEEVIL (*Anthonomus grandis*) - NORTH CAROLINA - Active in older fields in Coastal Plains. Counts 2 per 100 plants in some Scotland County fields. Populations in older cotton about 1 per 100 plants in Wilson and Northampton Counties. None found in 6 Montgomery County fields and very few to date in Hoke County. (Cott. News Lett.). SOUTH CAROLINA - Appearing in Coastal Plain fields where activity is increasing. Puncturing squares where present. (Cott. Lett.) After heavy rains, emergence and movement increased materially in the Florence area. Infestations in fields examined ranged light to heavy. Conditions remain favorable for maximum populations. Some damage noted in older cotton. (Taft, Hopkins, Jernigan). GEORGIA - Square counts in 11 southern fields ranged 0-60 percent punctured squares and averaged 7 percent. (Johnson). ALABAMA - Infestations 0-20 percent in 10 fields checked, with average about 10 percent. (Grimes). TENNESSEE - Only 3 live weevils found, all found in western Hardin County. (Locke). MISSISSIPPI - Six of 20 fields examined in delta counties infested. Weevil counts ranged 50-250 per acre, averaged 75. First squares large enough to puncture were observed. Hot, dry weather appears to be slowing down weevil movement. (Merkl et al.). LOUISIANA - Light infestation in St. Landry and West Carroll Parishes. (Spink). Found in 27 of 46 fields examined in the Tallulah area. An average of 54 per acre found, ranging 0-375 per acre. Percentage of survival in hibernation cages to June 10 was 1.08, compared with 2.66 at the same time in 1959. (Smith et al.). TEXAS - Found at average rate of 150 per acre in 11 untreated fields and 69 per acre in 37 treated fields, with an overall average of 100 in McLennan and Falls Counties. Egg deposition occurred in some early planted fields. Counts at same time in 1959 averaged 76 per acre. (Parencia et al.) OKLAHOMA - Beginning to feed on small squares as they develop on early cotton in Jefferson County. Counts averaged 0-10 per 250 feet of row in a Choctaw County field, one in a Coal County field and 4 in a field checked in Wagoner County. Averaged 0-2 per 250 feet of row in fields checked in Okfuskee, Okmulgee, Hughes and Muskogee Counties. (Vinson, Flora, Robinson).

BOLLWORMS (*Heliothis* spp., et al.) - SOUTH CAROLINA - Appearing in Coastal Plain fields, with increase in feeding on terminals and small squares. (Cott. Lett.). Light to moderate in Florence area. (Taft, Hopkins, Jernigan). GEORGIA - Egg counts in 11 southern cotton fields ranged 4-48 per 100 terminal buds and averaged 24. Larval counts ranged 1-20 per 100 terminals and averaged 5. (Johnson). ALABAMA - Moderate infestations in fields in Henry and Coffee Counties. Small larvae found in most fields and egg counts ranged 10-150 per 100 terminals. Many eggs very close to hatch. (Grimes). Severe infestation in Autauga County. Up to 49 larvae and 290 eggs per 100 terminals. (Rawson). MISSISSIPPI - Very light moth catches in light traps in delta counties. Activity still mostly restricted to corn. (Merkl et al.). TEXAS - Light egg deposition observed in a few McLennan and Falls County fields. (Parencia et al.). OKLAHOMA - Averaged 10 eggs and 4 larvae per 250 feet of row in a field in Choctaw County. (Flora). ARIZONA - Found in Yuma and Maricopa Counties. (Ariz. Coop. Sur.)

CABBAGE LOOPER (*Trichoplusia ni*) - LOUISIANA - Light infestations on cotton in Caddo Parish. (Spink). ARKANSAS - Small numbers observed in cotton in Desha County. (Black). OKLAHOMA - Found in most fields checked in southeast and east central areas. Counts averaged 0-6 per 250 feet of row in 3 fields checked in Choctaw County, 1-1.5 in a field in Coal County and 4 in a field in Wagoner County. Averaged 3 and 6 per 250 feet of row in 2 fields in Okmulgee and Muskogee Counties. (Flora, Robinson). TEXAS - Occasionally noted in a few fields in McLennan and Falls Counties. (Parencia et al.).

COTTON SQUARE BORER (*Strymon melinus*) - TEXAS - Occasionally noted in a few fields in McLennan and Falls Counties. (Parencia et al.).

STALK BORER (Papaipema nebris) - TENNESSE - Damaging cotton around edges of fields in western area. An unusually early date. (Locke). MISSISSIPPI - Very light damage noted in field in delta area. (Merk1 et al.).

PALE-SIDED CUTWORM (Agrotis malefida) - CALIFORNIA - A single adult taken in a light trap in Bard, Imperial County. This is the first California record. (Cal. Coop. Rpt.).

YELLOW-STRIPED ARMYWORM (Prodenia ornithogalli) - TENNESSEE - Causing some damage around the edges of some cotton fields in western area. (Locke). OKLAHOMA - Appearing in some fields in western Muskogee and Okmulgee Counties. (Robinson).

BEE T ARMYWORM (Spodoptera exigua) - ARIZONA - Injurious numbers in a few cotton fields in Yuma County. (Ariz. Coop. Sur.).

A LEAF ROLLER (Platynota sp., prob. rostrana) - LOUISIANA - Larvae heavily infesting cotton in some areas of Acadia and St. Tammany Parishes. Damage to terminals ran as high as 75 percent. (Spink).

FLEAHOPPERS - ALABAMA - Caused considerable damage to cotton in southeast area. (Grimes). MISSISSIPPI - Light on cotton in delta counties. (Merk1 et al.). TEXAS - Psallus seriatus migration to cotton was considerably less than previous week in McLennan and Falls Counties. Infestation averaged 8.9 per 100 terminals in 46 fields, with infestations exceeding 25 per 100 terminal level in 1 treated and in 2 untreated fields. This compares with 10.7 per 100 terminals in 36 fields during corresponding week of 1959. (Parenchia et al.). OKLAHOMA - P. seriatus counts ranged 15-100 per 100 plants in 5 cotton fields checked in the south central area. Ranged 3-9 per 250 feet of row in 3 fields checked in Choctaw County and averaged 3 per 250 feet of row in a field checked in Wagoner County. Averaged 0-2 per 250 feet of row in fields checked in Okfuskee, Okmulgee, Hughes and Muskogee Counties. (Vinson, Flora, Robinson). ARIZONA - Spanogonicus albofasciatus populations 2-50 per 100 sweeps, with damage very serious in some fields in Maricopa, Pinal and parts of Pima Counties. Controls very slow. (Ariz. Coop. Sur.).

APHIDS - NORTH CAROLINA - Reported in many fields; apparently not Aphis gossypii. Beneficial insects abundant in some fields but not reducing populations as in former years. (Cott. News Lett.). SOUTH CAROLINA - Occasionally seen; one field in Florence area very severely damaged. (Taft, Hopkins, Jernigan). TENNESSEE - Building up slightly in western area but doing very little damage at present. Predatory insects keeping populations down. (Locke). MISSISSIPPI - General light infestations with little damage in delta counties. (Merk1 et al.). TEXAS - No infestations observed in McLennan and Falls Counties. (Parenchia et al.). OKLAHOMA - A. gossypii light, 35 per linear foot, in a field in Tillman County; light in 2 of 5 fields checked in south central area; occasional to light in fields checked in Hughes, Okfuskee, Okmulgee and Muskogee Counties. (Hatfield, Vinson, Robinson).

THRIPS - SOUTH CAROLINA - Few remain in fields in Florence area. (Taft, Hopkins, Jernigan). TENNESSEE - Causing some damage in western area. Populations generally low. (Locke). MISSISSIPPI - Populations very high in some young cotton which has not been treated. Range 0.1-20.6 in experimental plots in the delta counties. (Merk1 et al.). LOUISIANA - Counts made in 43 cotton fields in Tallulah area; all infested. Averages were 6.12 per plant in untreated fields and 3.57 per plant in treated fields, with average of 3.81 for all fields checked. (Smith et al.). TEXAS - Injurious infestations continue in McLennan and Falls Counties in late-planted, untreated cotton fields. (Parenchia et al.). OKLAHOMA - Frankliniella sp. light, 40 per linear foot, in a cotton field in Tillman County; light to moderate, 3-80 per 100 plants, in 5 fields in south central area; heavy to severe damage to 2 fields in Choctaw County; occasional to light in fields checked in Hughes, Okfuskee, Okmulgee and Muskogee Counties. (Hatfield, Vinson, Flora, Robinson).

SPIDER MITES - ALABAMA - Moderate on cotton in Henry County. (Grimes).
MISSISSIPPI - Generally light infestations, with little damage in delta counties. (Merkl et al.). TENNESSEE - Present in most fields that supported heavy infestations in 1959 in western area. Some leaves already showing discoloration and populations will probably increase. (Locke).

LYGUS BUGS (Lygus spp.) - ARIZONA - Few adults appearing in cotton fields in Yuma, Maricopa and Pinal Counties. (Ariz. Coop. Sur.) LOUISIANA - L. lineolaris averaged 18 per 100 sweeps in 6 fields in Tallulah area. (Smith et al.).
MISSISSIPPI - L. lineolaris general over delta counties. Movement to cotton increased markedly. Some squares damaged and feeding in plant terminals common. (Merkl et al.).

WIREWORMS - SOUTH CAROLINA - Attacked seedling cotton in several Pee Dee area fields for first time in many years. Stands that survived this damage now seem to have outgrown it. (Cott. Lett.).

FLEA BEETLES - TENNESSEE - Present in most fields but causing little damage. (Locke). MISSISSIPPI - Localized light damage from Washington, Sunflower and Humphries Counties. (Merkl et al.).

FOREST, ORNAMENTAL AND SHADE TREE INSECTS

SPRUCE BUDWORM (Choristoneura fumiferana) - MINNESOTA - Approximately half of a 20,000-acre control project in the Superior National Forest is now completed. Larvae now in fourth and fifth instars around Ely and Isabella; mostly fourth instar at Tofte. (Minn. Ins. Rpt.). MONTANA - Infestation on ornamental spruce in Bozeman is quite high. (Roemhild, May 15-June 1).

JACK-PINE BUDWORM (Choristoneura pinus) - MINNESOTA - In third instar at Ely and still in staminate flowers. (Minn. Ins. Rpt.).

DOUGLAS-FIR TUSsock MOTH (Hemerocampa pseudotsugata) - COLORADO - Defoliating new growth of spruce in Denver. (Colo. Ins. Sur.).

A PHYCITID (Dioryctria sp.) - IDAHO - Pitch nodules at tips of lateral twigs, caused by larvae (probably a species of this genus) feeding in the cambium, are becoming very noticeable on old growth ponderosa pine throughout the Slate Creek drainage in Nezperce National Forest. Damage reported occurred during 1959. (Tunnock).

SPRUCE NEEDLE MINER (Taniva albolineana) - MONTANA - Damaged ornamental spruce in Billings, Yellowstone County. (Roemhild, May 15-June 1).

LARCH CASEBEARER (Coleophora laricella) - IDAHO - Considerable increase in severity of infestation over that of 1959. Complete defoliation of western larch in heavy centers totaling thousands of acres; gross area of defoliation visible during aerial surveys covers more than 500 square miles. (Tunnock).

BAGWORM (Thyridopteryx ephemeraeformis) - MARYLAND - First larvae of season noted on evergreens at several localities in Talbot County on June 6. (U. Md., Ent. Dept.). INDIANA - Hatching at Lafayette, Tippecanoe County, June 6. (Schuder).

DOUGLAS-FIR BEETLE (Dendroctonus pseudotsugae) - CALIFORNIA - Severly damaging groups of old growth Douglas-fir on east fork of Willow Creek in the Six Rivers National Forest. (D. Leisz).

PINE ROOT COLLAR WEEVIL (Hylobius radicis) - MINNESOTA - Adults active on ponderosa, red, jack and Scotch pine at Taylors Falls, Chisago County. (Minn. Ins. Rpt.). WISCONSIN - Few larvae collected from red pine in Oconto and Waushara Counties, May 23-28. (Wis. Coop. Sur.).

WHITE-PINE WEEVIL (Pissodes strobi) - WISCONSIN - Ovipositing on white pine and Norway spruce in Marquette, Waushara and Waupaca Counties week of May 22-28. (Wis. Coop. Sur.).

A WEEVIL (Scythropus sp.) - IDAHO - Adults common, feeding on needles of pines and larch; damage is negligible. (Tunnock).

PINE SAWFLIES (Neodiprion spp.) - IOWA - Larvae of N. sertifer present in Jefferson and Van Buren Counties. (Iowa Ins. Inf., June 6). According to ARS records, this is a first report of this species in each of these counties. (PPC). WISCONSIN - N. swainei ovipositing on new needles of jack pine in Columbia County on June 7. Larvae of N. nanulus, about three-quarters of an inch long, present in central and west central counties; light defoliation reported. (Wis. Coop. Sur.).

LARCH SAWFLY (Pristiphora erichsonii) - WISCONSIN - Oviposition observed in Langlade County on June 1. (Wis. Coop. Sur.).

SAWFLIES - KANSAS - Monoctenus melliceps infesting junipers in Franklin County. (Calkins). CALIFORNIA - Susana cupressi occurring as a heavy infestation on

Cupressus forbesi in Town and Country area of Sacramento County. (Cal. Coop. Rpt.).

EASTERN SPRUCE GALL APHID (Chermes abietis) - MARYLAND - Galls abundant on Norway spruce in a nursery planting at Flintstone, Allegany County. (U. Md., Ent. Dept.).

SPITTLEBUGS (Aphrophora spp.) - DELAWARE - A. parallela nymphs very abundant on loblolly and Virginia pines in southeastern Sussex County. (Burbutis, Mason). MINNESOTA - A. parallela appearing on jack pine around Ely, St. Louis County. (Minn. Ins. Rpt.). WISCONSIN - Moderate to heavy populations of A. saratogensis in many plantations in Vilas, Marinette and Oconto Counties. Many second-stage nymphs present. (Wis. Coop. Sur.).

A STINK BUG (Chlorochroa uhleri) - WISCONSIN - Numbers found feeding on main stems and larger branches of 3-4-foot tall plantation red pine in the Arena School Forest, Iowa County, on May 13. (Wis. Coop. Sur.).

PINE NEEDLE SCALE (Phenacaspis pinifoliae) - WYOMING - Immature forms emerging on pines in Laramie, Albany County. (Fullerton). CALIFORNIA - Heavy on mugho pine in Tullake, Siskiyou County. (Cal. Coop. Rpt.).

PINE TORTOISE SCALE (Toumeyella numismaticum) - WISCONSIN - Light to moderate infestations in some young plantations in Florence and Marinette Counties; overwintering females rapidly reaching maturity. (Wis. Coop. Sur.).

SPIDER MITES - NEVADA - Moderate to heavy populations of unspecified species present on evergreen shrubs in Reno-Sparks area, Washoe County. (Bechtel). MINNESOTA - Building up in some evergreen plantations. (Minn. Ins. Rpt.).

EASTERN TENT CATERPILLAR (Malacosoma americanum) - OHIO - Most larvae completed development and were pupating June 7. (Rings). ILLINOIS - Have matured in southern area and are rapidly maturing in northern area. The species has been abundant in the southern and northern thirds of the State this season but has been scarce or absent in central third of the State. (Ill. Ins. Rpt.). WISCONSIN - Late-instar larvae leaving nests. Localized heavy infestations, complete defoliation of 20-foot pin cherry and apple trees common in Rock County; infestations are heaviest in over a decade in southern part of county. (Wis. Coop. Sur.).

FOREST TENT CATERPILLAR (Malacosoma disstria) - WISCONSIN - Late-instar larvae relatively light in numbers in Langlade County. (Wis. Coop. Sur.).

TENT CATERPILLARS (Malacosoma spp.) - NEW YORK - Moving and feeding on pin oak, willow, honeylocust and Norway maple in Suffolk County. (N. Y. Wkly. Rpt., June 6). WYOMING - Small infestations found in Medicine Bow Forest in Albany County. (Fullerton). CALIFORNIA - M. constrictum heavy on live oak and shrubs in a 25,000-acre area in Cleveland National Forest, causing considerable defoliation. (J. Pierce).

A SYCAMORE BORER (Ramosia resplendens) - CALIFORNIA - Heavy infestation in live oak in Woodside, San Mateo County. (Cal. Coop. Rpt.).

SPRING CANKERWORM (Paleacrita vernata) - ILLINOIS - Continues to feed on elms in western section of State. (Ill. Ins. Rpt.).

CANKERWORMS - IOWA - Unspecified species have damaged a variety of shade trees. (Iowa Ins. Inf., June 6). NEW YORK - Unspecified species completely defoliated trees in Fort Salonga, Suffolk County. (N. Y. Wkly. Rpt., June 6).

ELM LEAF BEETLE (Galerucella xanthomelaena) - MASSACHUSETTS - Eggs and larvae now present. (Wheeler, June 7). NEW YORK - Large numbers of eggs being laid. (N. Y. Wkly. Rpt., June 6). DELAWARE - Eggs fairly abundant on elms in Newark area, New Castle County. (Burbutis, Mason). ARKANSAS - Controls for this pest are being

applied in Booneville, Logan County. (Ark. Ins. Sur.). KANSAS - Hatching; larvae skeletonizing leaves of elms in Dodge City, Ford County. (Peters). COLORADO - Adults defoliating elms in Olatha, Montrose County. (Colo. Ins. Sur.). NEVADA - First-instar larvae present in Fallon, Churchill County. (Parker).

SMALLER EUROPEAN ELM BARK BEETLE (Scolytus multistriatus) - WISCONSIN - During the past week the first case of Dutch elm disease for Stoughton, Dane County, was diagnosed. As of June 8, the 35 cases diagnosed in 1960 have come from 12 municipalities in 6 southeastern counties, all of which (except for Stoughton) have had cases in previous years. After the major emergence of S. multistriatus is completed, a sharp rise is expected in the number of positive cases. (Wis. Coop. Sur.).

BRONZE BIRCH BORER (Agrilus anxius) - WISCONSIN - Pre-emergence stages found on ornamental birch in Jackson County June 3. (Wis. Coop. Sur.).

POPLAR AND WILLOW BORER (Sternochetus lapathi) - IDAHO - Adults have emerged from winter hibernation and are flying in the Clarkia area, Shoshone County. (Portman).

A BUPRESTID (Dicerca sp.) - MONTANA - Adults very abundant on elms and willows near Forsyth, Rosebud County. (Roemhild, May 15-June 1).

A CURCULIONID (Myrmex myremex) - KANSAS - Larvae killed twigs of sycamore infected with anthracnose in Shawnee County. (Thompson).

ELM LEAF APHID (Myzocallis ulmifolii) - KANSAS - Counts on American elm ranged 50-100 per leaf in Johnson County. Dripping honeydew spotting cars in Johnson and Wyandotte Counties. (Thompson).

JUNE BEETLES - IOWA - Adults of unspecified species have damaged leaves of a variety of shade trees. (Iowa Ins. Inf., June 6). WISCONSIN - Larvae plentiful in a 70-acre sod field in Langlade County on May 25; adults also numerous. Adults of Phyllophaga drakii observed at city limits of Spooner, Washburn County, May 18-19. (Wis. Coop. Sur.).

LEAF BEETLES - KANSAS - Counts of unspecified species on willows and poplars were 3-4 per leaf in Franklin County on June 2-3. (Thompson).

PAINTED MAPLE APHID (Drepanaphis acerifoliae) - DELAWARE - Very abundant on maples in the Wilmington area; causing some leaf drop. (Burbutis, Mason).

APHIDS - MINNESOTA - Infestations of unspecified species on terminal growth of flowering crabapple, spirea, dogwood and other deciduous stock appear to be much lighter than in past several years. A few heavy infestations on roses have been reported, but the general level is also lower than usual. (Minn. Ins. Rpt.). KANSAS - Counts of an unspecified species were over 100 per leaf on ash in Johnson County; many leaves curling. (Thompson). UTAH - Unspecified species spottedly numerous on roses at several northern localities; infestation heavy and damaging columbine at Delta; severely curled snowball bush foliage at Fillmore; and are extremely numerous on roses and curling elm leaves in same area. Severely infesting streamside willows and some weeping willows at Minersville, Beaver County. (Knowlton).

EUROPFAN ELM SCALE (Gossyparia spuria) - UTAH - Damaging elms at Fillmore and Southerland in Millard County. (Knowlton).

GLOOMY SCALE (Chrysomphalus tenebriosus) - DELAWARE - Heavy infestations severely injured red maples at Seaford, Sussex County. Females have just begun to give birth to living young. (Bray).

AN AGROMYZID (Agromyza aristata) - NORTH DAKOTA - Severe leaf injury to American elm occurring in the Fargo area, Cass County. Infestation is the heaviest record-

ed. Trees exhibit brown, scorched appearance when heavily mined leaves dry. (N. D. Ins. Sur.).

BIRCH LEAF MINER (Fenusa pusilla) - MINNESOTA - Active in the Minneapolis-St. Paul area and farther north. (Minn. Ins. Rpt.).

OBLIQUE-BANDED LEAF ROLLER (Archips rosaceana) - OREGON - Infesting approximately 10 percent of growing tips of one Portland area holly planting. Larvae were reaching maturity June 10. (Capizzi).

ARMYWORMS - CALIFORNIA - Prodenia praefica heavy on Erodium sp. in Amador County; and Spodoptera exigua heavy on knapweed in Corona, Riverside County. (Cal. Coop. Rpt.).

ROSE CHAFER (Macrodactylus subspinosus) - MASSACHUSETTS - Now attacking roses, peonies and many other plants. (Crop pest Cont. Mess.). CONNECTICUT - Defoliating paper birch and mountain ash trees, as well as geraniums, and many other flowering annuals in a cemetery at Shelton, Fairfield County. (Johnson).

ROSE CURCULIO (Rhynchites bicolor) - CALIFORNIA - Generally heavy infestations on wild rose in the Hamilton City area, Glenn County. (Cal. Coop. Rpt.).

ROSE LEAF BEETLE (Nodonota puncticollis) - MARYLAND - Injuring rose foliage in the Baltimore area. (U. Md., Ent. Dept.).

BOXELDER APHID (Periphyllus negundinis) - MONTANA - Very abundant in the eastern portion of State; just starting to build up in mountain area. (Roemhild, May 15-June 1).

BLACK SCALE (Saissetia oleae) - MARYLAND - Infesting azaleas at Silver Spring, Montgomery County. (U. Md., Ent. Dept.).

CITRICOLA SCALE (Coccus pseudomagnoliarum) - CALIFORNIA - Heavy populations occurred on Celtis sp. in Fresno, Fresno County. Host verified by H. Dunnegan. (Cal. Coop. Rpt., May 13).

COCONUT SCALE (Aspidiotus destructor) - CALIFORNIA - Medium on Aglaonema sp. in a nursery in San Francisco, San Francisco County. (Cal. Coop. Rpt.).

EUONYMUS SCALE (Unaspis euonymi) - MARYLAND - Crawlers active on euonymus at Cumberland, Allegany County. (U. Md., Ent. Dept.). OKLAHOMA - Killing 2 Japanese euonymus plants in Hugo, Choctaw County. (Flora).

SCALE INSECTS - DELAWARE - Young crawlers of Matsucoccus gallicolus fairly abundant on pitch pine at Rehoboth, Sussex County, and collected May 21, constitute a new State record for this species. Collected and determined by D. F. Bray. (Bray). MARYLAND - Leucaspis japonica active on privet at Hyattsville, Prince Georges County. (U. Md., Ent. Dept.). KANSAS - A severe infestation of an unspecified brown species observed in Franklin County. Some canned nursery plants being killed. (Calkins, Thompson). OKLAHOMA - Lecanium corni complex heavy on some elm trees checked in the Stillwater area, Payne County. (Walton). Kermes sp. moderate on oaks in southeastern third of the State. (Flora). OREGON - Infestations of Pulvinaria floccifera on ornamentals have been common this spring in the Willamette Valley. (Nicolaison).

ROSE LEAFHOPPER (Edwardsiana rosae) - UTAH - Discoloring rose foliage at Ogden, Willard, Centerville, Salt Lake City and Farmington in the northern portion of the State and at Delta and Fillmore in the central area. (Knowlton).

A MEALYBUG (Pseudantonina arundinariae) - CALIFORNIA - This species, and a scale insect (Aclerda sp.), occurred as a heavy infestation on bamboo; collected by D. Bingham and R. Garvey, May 25, in a nursery property in San Rafael, Marin County. Determined by R. F. Wilkey. (Cal. Coop. Rpt.).

HACKBERRY NIPPLE GALL (Pachypsylla celtidis-mamma) - IOWA - Very abundant on hackberry leaves. (Iowa Ins. Inf., June 6).

GALL INSECTS - NEW JERSEY - Galls of unspecified species are numerous on honey-locusts and ornamental locusts. (Ins.-Dis. Newsl., June 6). MONTANA - Many inquiries received from over the State concerning mite and aphid galls on cottonwood. (Roemhild, May 15-June 1). WYOMING - Numerous species infesting ornamentals and trees throughout the State. (Fullerton).

A LOCUST MIDGE (Dasyneura pseudacaciae) - DELAWARE - Many leaves of black and honey-locust trees in Newark area of New Castle County with midribs rolled together. (Burbutis, Mason).

INSECTS AFFECTING MAN AND ANIMALS

HORN FLY (Siphona irritans) - ILLINOIS - Ranges 0-200 per animal with an average of 58.7 in central area. (Ill. Ins. Rpt.). SOUTH DAKOTA - Reported numerous in Cottonwood area, Jackson and Haakon Counties. (Rogoff). KANSAS - Counts on a herd of cows in Elk County ranged 50-120 per head with an average of 80 per head. Counts on bulls in same area averaged 200 per head. (Peters). OKLAHOMA - Counts continued high on range cattle in Woodward and Harper Counties. (Howell). Counts averaged 400-500 per animal on beef cattle in Hughes County. (Robinson). Counts averaged 500 per animal on 20 cows in McCurtain County and 600 on 60 cows in Pushmataha County. (Goin).

FACE FLY (Musca autumnalis) - MARYLAND - Moderate numbers on beef and dairy cattle in Montgomery, Prince Georges, Carroll and Harford Counties. (U. Md., Ent. Dept.). These are new county records. (PPC). ILLINOIS - Ranged 0-8 per animal, averaged 2.5. Heaviest populations on east side of State. (Ill. Ins. Rpt.).

HOUSE FLY (Musca domestica) - ILLINOIS - Averaged 2 per animal in central area. (Ill. Ins. Rpt.). OKLAHOMA - Counts averaged 100 per scudder grid in Stillwater area. (Howell).

TABANIDS - LOUISIANA - Heavy infestations of Tabanus sp. annoying livestock over most of State. (Spink). OKLAHOMA - Unidentified species light on cows checked in Pushmataha and McCurtain Counties. (Goin). MARYLAND - Chrysops sp. annoying farmers at several localities in St. Marys and Calvert Counties. (U. Md., Ent. Dept.). WISCONSIN - First adult tabanids observed in Jackson County on June 2. Few adults in Oconto County last week in May. (Wis. Coop. Sur.).

CATTLE GRUBS (Hypoderma spp.) - OHIO - Heel flies annoying cattle in central area June 2 and 10. Also several reports from farmers. (Holdsworth).

STABLE FLY (Stomoxys calcitrans) - ILLINOIS - Ranged 0-200 per animal, with an average of 0.4, in central area. (Ill. Ins. Rpt.). OKLAHOMA - Averaged 2-3 per animal on cattle checked in Stillwater area. (Howell).

BLACK FLIES - MINNESOTA - Simuliids reported from suburbs north of St. Paul. (Minn. Ins. Rpt.).

MOSQUITOES - MARYLAND - Aedes sollicitans annoying at several localities in Dorchester County. (U. Md., Ent. Dept.). TEXAS - In Jefferson County during the month of May Mansonia perturbans occurred quite regularly in the Port Arthur trap; Aedes sollicitans was found in same trap in small numbers, but no breeding was found in the county. Psorophora confinnis occurred in large numbers in Beaumont; and Aedes vexans occurred in North Beaumont only. (Thompson, Jefferson Co. Mosq. Cont. Comm.). WISCONSIN - Abundant in many sections. Populations expected to be heavier. Several reports of mosquitoes keeping herds from grazing on some nights. (Wis. Coop. Sur.). MINNESOTA - Of 1,697 larval collections during May 22-28, 1,418 were Aedes vexans and 157 were Culiseta inornata. Of 1,002 larval collections made May 29-June 4, 819 were A. vexans and 110 were C. inornata. Adult mosquito counts

in light trap catches in Minneapolis and St. Paul have remained moderate to light. Catches in outlying areas have been considerably heavier, but far less than a year ago. (Minn. Ins. Rpt.). IDAHO - Aedes canadensis adults abundant and biting viciously in woodland areas on northeastern Latah County. (Gittins). UTAH - Extremely annoying, well above normal in population in Delta, Hinckley, Sutherland, Oasis area, and troublesome at Leamington and Lynndylin Millard County. Annoying and numerous in Trenton and Benson area of Cache County. Aedes dorsalis dominant. (Knowlton).

SHEEP KED (Melophagus ovinus) - UTAH - Unusually heavy at shearing time in some herds sheared in western Millard County. Some herds sprayed following shearing. (Knowlton).

MIDGES - WISCONSIN - Very numerous at times around Lake Winnebago area. (Wis. Coop. Sur.). UTAH - Annoying people in the Delta-Desert area of Millard County. (Knowlton).

A SAND FLY (Culicoides sp.) - DELAWARE - Rather abundant and annoying in southern Sussex County. (Burbutis, Mason).

HUMAN FLEA (Pulex irritans) - DELAWARE - Adults biting people indoors in Kent County, June 1. (Burbutis, Mason).

A BROWN SPIDER (Loxosceles reclusa) - OKLAHOMA - Several people in central area of State reported bitten. (Shoemaker).

NORTHERN FOWL MITE (Ornithonyssus sylviarum) - ARKANSAS - Found in Washington County. First record for State. (Lancaster).

GRAIN MITE (Acarus siro) - OREGON - A heavy infestation on sacked feed in a Lincoln County mill, June 4. (Krantz).

TICKS - OHIO - Much more numerous than usual in southeastern area this season. (Stacy). OKLAHOMA - Amblyomma americanum heavy (averaged 20-30 per animal) on 80 head of cows checked in Pushmataha and McCurtain Counties. (Goin). Dermacentor variabilis populations have decreased materially in Payne County area. (Howell).

BENEFICIAL INSECTS

LADY BEETLES - ILLINOIS - Adult counts of unspecified species ranged 0-70 per 100 sweeps, with larval counts ranging 10-40 per 100 sweeps. (Ill. Ins. Rpt.).

MASSACHUSETTS - Larvae of unspecified species are very abundant and feeding on aphids. (Wheeler, June 7). OKLAHOMA - Hippodamia convergens counts averaged 3 per square foot of crown area in an alfalfafield in Tillman County (Hatfield); 4 per sweep in an alfalfafield, 2 per 100 leaves in a field of watermelon and were light to medium in cotton fields checked in south central area (Vinson); 3-30 per sweep in alfalfa and vetch and 1-2 per stalk in grain sorghum and corn in Choctaw County (Goin); 0.5-1 per sweep in alfalfa checked in east central area (Robinson). NEBRASKA - Hippodamia convergens, H. tredecimpunctata and Coleomegilla maculata lengi gradually building up in all crops, especially alfalfa. (Simpson). Counts in Lancaster and Cass Counties averaged 23 per 100 sweeps. (Manglitz). WYOMING - Hippodamia sp. adults averaged 3 per 25 sweeps in each of 18 alfalfa fields in Campbell, Sheridan and Johnson Counties. (Fullerton).

MELYRIDES (Collops spp.) - NEBRASKA - Present in low numbers in most alfalfa fields. (Simpson). WYOMING - Adults averaged 2 per 25 sweeps in each of 12 fields of alfalfa in Sheridan and Johnson Counties. (Fullerton).

A SCARABAEID (Hoplia oregona) - CALIFORNIA - Heavy populations feeding on klamathweed in the La Grange area of Stanislaus County. This is an unusual situation, especially in large numbers. (Cal. Coop. Rpt.).

NABIDS (Nabis spp.) - NEVADA - Almost entirely absent in fields of alfalfa in Panaca, Lincoln County. (Lauderdale). ILLINOIS - Populations vary 5-80 per 100 sweeps. (Ill. Ins. Rpt.). OKLAHOMA - Counts in alfalfa averaged 6 per square foot of crown area in a field in Tillman County (Hatfield), 1.5 per sweep in a Jefferson County field (Vinson), and 0.1 per sweep in a field checked in Choctaw County (Goin); and were occasional in alfalfa in the east central area (Robinson). WYOMING - Adults averaged 3 per 25 sweeps in each of 18 alfalfa fields in Campbell, Sheridan and Johnson Counties. (Fullerton).

LACEWINGS (Chrysopa spp.) - ILLINOIS - Adult and larval counts of C. oculata each vary 0-20 per 100 sweeps. (Ill. Ins. Rpt.). OKLAHOMA - Light (1 per sweep) in a field of alfalfa checked in Jefferson County (Vinson) and in a field of alfalfa and field of vetch in Choctaw County (Goin). NEBRASKA - Most alfalfa fields contain low numbers. (Simpson).

A BIG-EYED BUG (Geocoris sp.) - NEBRASKA - Low numbers present in most alfalfa fields. (Simpson).

FLOWER BUGS (Orius spp.) - OKLAHOMA - O. insidiosus counts ranged 1-2 per sweep in alfalfa and vetch fields checked in Choctaw County. (Goin). WYOMING - Adults of Orius sp. averaged 3 per 25 sweeps in each of 8 alfalfa fields in Sheridan County. (Fullerton).

SYRPHIDS - ILLINOIS - Larvae of unspecified species ranged 0-80 per 100 sweeps. (Ill. Ins. Rpt.).

AN EULOPHID PARASITE - NEBRASKA - Some alfalfa fields heavily populated with an undetermined species of pea aphid parasite. Many fields in eastern and northeastern areas contain low to moderate populations. (Simpson).

HONEY BEE (Apis mellifera) - OKLAHOMA - Honey flow continues very good in Stillwater area, Payne County. Yellow sweetclover has just passed peak, while white sweetclover is just beginning. Plants are in better condition and more numerous than usual in the area. Weather has been ideal. (Bieberdorf).

A CINNABAR MOTH (Tyria jacobaeae) - CALIFORNIA - This introduced moth for the biological control of tansy ragwort has become established in stands of this weed in Mendocino County. Moths released in 1959, mated and produced larvae which successfully went through the winter with moth emergence this spring. These moths are reproducing. (J. K. Holloway).

A LYONETIID (Leucoptera spartifoliella) - CALIFORNIA - The first attempt at biological control of Scotch broom (Cytisus scoparius) in the United States was initiated with the release of 1,000 moths June 7 by James K. Holloway, Frank Skinner and Lowell Mobley, in a select location near Georgetown, El Dorado County. Release of the moth brings to fruition a program which was first recommended in 1921 by Prof. Harry Smith. It is now a matter of time to see how successful the moth will be in controlling the estimated 100,000 acres of Scotch broom in the State. In the meantime, research will continue seeking another species of insect that can be used in case this species is not entirely successful. (Cal. Coop. Rpt.).

MISCELLANEOUS INSECTS

JAPANESE BEETLE (Popillia japonica) - DELAWARE - First adult of season noted on a hickory tree in Newark area, New Castle County. (Linehan). NORTH CAROLINA - First adult of season in Wayne County emerged June 7. (Brown). General emergence in Pender, Duplin and New Hanover Counties. (Fedoronko). Adults emerging in Tyrrell County. (Lancaster). OKLAHOMA - Bait traps checked in Tulsa area continue to give negative results. (Robinson).

A SCARABAEID (Plectris aliena) - FLORIDA - Collected in Pensacola, Escambia County, on May 17 by T. W. Boyd. This is the first report for the State. The species was previously known from Charleston, South Carolina, damaging turf. (Fla. Coop. Sur.).

SOUTHERN PINE SAWYER (Monochamus titillator) - NORTH CAROLINA - Cutting through sheetrock and celotex in new houses in several areas of the State. (Jones, Speers, Farrier).

WHARF BORER (Nacerdes melanura) - MARYLAND - Adults taken from a boat at Annapolis, Anne Arundel County. (U. Md., Ent. Dept.).

CARPET BEETLE (Anthrenus scrophulariae) - NORTH CAROLINA - Causing itching of operators in a telephone exchange in Wake County. (Jones, Farrier).

FOUR-LINED PLANT BUG (Poecilocapsis lineatus) - MASSACHUSETTS - Nymphs are active on many plants. (Wheeler, June 7).

EASTERN SUBTERRANEAN TERMITE (Reticulitermes flavipes) - NORTH CAROLINA - Probably this species, swarming in some houses in Columbus County. (Read). MARYLAND - Winged forms noted at several localities over the State. (U. Md., Ent. Dept.).

CARPENTER ANTS (Camponotus spp.) - IOWA - Unspecified species swarming at Ames. (Iowa Ins. Inf., June 6). NEW JERSEY - Winged forms of C. pennsylvanicus are rather numerous. (Ins.-Dis. Newsl., June 7).

HARVESTER ANTS (Pogonomyrmex spp.) - NEW MEXICO - Swarms of winged forms causing a nuisance at missile tracking stations at White Sands Missile Range in Dona Ana, Otero and Lincoln Counties. (N. M. Coop. Rpt.). UTAH - Nests of P. occidentalis numerous on range and some farms in the Flowell-Pahvant area of Millard County. (Knowlton).

PAVEMENT ANT (Tetramorium caespitum) - MARYLAND - Annoying homeowners at several localities in Montgomery and Baltimore Counties. (U. Md., Ent. Dept.).

CARPENTER BEE (Xylocopa virginica) - MARYLAND - Boring into wood of homes in Montgomery and Prince Georges Counties. (U. Md., Ent. Dept.).

CORRECTIONS

CEIR 9 (Index) : 4 - Chaff scale (Paralatoria pergandii) should read Chaff scale (Parlatoria pergandii).

CEIR 10 (21) : 409 - PINE NEEDLE MINER (Exotelia pinifoliella) should read (Exoteleia pinifoliella).

CEIR 10 (22) : 445 - A HONEYLOCUST POD GALL (Dasnyneura sp.) should read (Dasyneura sp.).

CEIR 10 (23) : 471 - A LEAF BEETLE (Calligrapha sigmoides) should read (Calligrapha sigmoidea).

ADDITIONAL NOTES

ALABAMA - TOBACCO THRIPS (Frankliniella fusca) damage to peanuts still evident throughout peanut belt. SOUTHERN GREEN STINK BUG (Nezara viridula) heavy in corn, and MEXICAN BEAN BEETLE (Epilachna varivestis) heavy on soybeans in southwest area. FALL WEBWORM (Hyphantria cunea) prevalent on pecan and persimmon throughout southern area. CONVERGENT LADY BEETLE (Hippodamia convergens) plentiful in most fields surveyed. (Grimes, Eden).

IOWA - BLACK CUTWORM (Agrotis ipsilon) reported from Shelby, Polk, Clarke, Union, Adams, Crawford and Story Counties. Beginning to work in low spots in Clay, O'Brien and Sioux Counties. A moderately infested field in Harrison County showed 6-8 percent of plants wilted and a stand reduction from 16,000 to 8,800 plants per acre. In this field, 25 percent of larvae had pupated and the rest were full-grown. In other fields in same area, larvae smaller but also working underground. In central area, larvae one-half to three-fourths-inch long and feeding on surface. EUROPEAN CORN BORER (Pyrausta nubilalis) 84 percent emerged at Ankeny. First egg mass found June 6 and on June 8 an average of 2 egg masses per 100 plants found on 20-inch corn. First egg masses found on sweet corn at Muscatine June 9. ARMYWORM (Pseudaletia unipuncta) defoliated corn in Clarke, Union, Ringgold and Story Counties. Now moving from rank grasses and winter grains into corn. Average 0.25-1 per square foot. WIREWORMS - Present in low spots in many corn fields in Clay and Dickinson Counties. Averaged 2 per hill in damaged areas and destroyed some corn in spite of treatments. STALK BORER (Papaipema nebris), first and second instars, boring into small corn in Mills County. BILLBUGS damaged 94 percent of corn plants in Crawford County area, with a 20-25 percent reduction in stand. LEAF BEETLES defoliated willow trees in Keokuk County. RHUBARB CURCULIO (Lixus concavus) damaged rhubarb at Clutier, Tama County. EASTERN TENT CATERPILLAR (Malacosoma americanum) defoliating wild cherry and wild plum in Poweshiek County. The major MOSQUITO pest for the State, Aedes vexans, became extremely abundant this week. In wooded areas, bite counts of 5-10 per minute were not uncommon. Aedes trivittatus, third or fourth in abundance in the State, appeared at Ames on June 7. (Iowa Ins. Inf.).

RHODE ISLAND - Local buildup of ALFALFA WEEVIL (Hypera postica) sufficient to cause spotty, heavy damage in Washington County. Generally light on first crop of alfalfa. CLOVER ROOT CURCULIO (Sitona hispidula) larval damage evident on nearly every root examined in a Washington County alfalfafield. MEADOW SPITTLEBUG (Philaenus leucophthalmus) unusually heavy in Providence County on grasses, legumes and other plants. POTATO APHID (Macrosiphum solanifolii) appeared in commercial potato plantings in South Kingstown. COLORADO POTATO BEETLE (Leptinotarsa decemlineata) second-instar larvae abundant. THREE-LINED POTATO BEETLE (Lema trilineata) adults unusually heavy in local areas in Washington County, with second-instar larvae also present. ASPARAGUS BEETLE (Crioceris asparagi) adults active on asparagus plantings. ROSE CHAFER (Macrodactylus subspinosus) adult infestations locally heavy in Washington County and BIRCH LEAF MINER (Fenusa pusilla) causing many complaints from all parts of State on gray and white birch. MAPLE BLADDER-GALL MITE (Vasates quadripedes) locally heavy in all areas of State. AMERICAN DOG TICK (Dermacentor variabilis) continues unusually heavy in Washington County and building up in importance in Providence County. (Kerr, Hansen, Mathewson).

VERMONT - CODLING MOTH (Carpocapsa pomonella) emergence slow due to cool nights; only 30 percent emergence has occurred. Egg laying doubtful. RED-BANDED LEAF ROLLER (Argyrotaenia velutinana) populations low. EUROPEAN RED MITE (Panonychus ulmi) still prevalent in some orchards and TWO-SPOTTED SPIDER MITE (Tetranychus telarius) found in Chittenden County, with some oviposition underway. ROSE CHAFER (Macrodactylus subspinosus) emerging in Chittenden County since June 7. JAPANESE BEETLE (Popillia japonica) larvae active in turf in Windsor area, up to 30 grubs per square foot. IMPORTED CABBAGEWORM (Pieris rapae) heavily laying eggs on cole crops. MOSQUITOES and BLACK FLIES heavy over most of State and FACE FLY (Musca autumnalis) found on cattle in Addison County, averaging 75 per animal. (MacCollom).

MAINE - A FLEA BEETLE, probably Epitrix cucumeris, light, with light damage to tomatoes in Orono area. SPINACH LEAF MINER (Pegomya hyoscyami) infestation and damage light in Orono area; moderate in Gray area. Hatch of EUROPEAN RED MITE summer-generation eggs has not occurred as of June 8. First generation almost all adults. OYSTERSHELL SCALE (Lepidosaphes ulmi) infestations spotty statewide, with heavy emergence of crawlers. APPLE APHID (Aphis pomi) stem mothers not too numerous; some evidence of leaf curling in Wilton area. Colonies scarce to date. EYE-SPOTTED BUD MOTH (Spilonota ocellana) larvae generally fully developed and in cocoons; about 20 percent pupated. RED-BANDED LEAF ROLLER first brood hatched and feeding; infestations generally light. APPLE MEALYBUG (Phenacoccus aceris) eggs found in the Wilton area; infestations in unsprayed checks much below 1959. A MIDGE (Dasyneura mali) first-stage maggots found curling leaves in New Gloucester area; eggs near hatch in Wilton area. CYCLAMEN MITE (Steneotarsonemus pallidus) moderate in Green area; damage moderate. A GALL (Callirhytis seminator) found on white oak in Orono week of June 6. Infestation and damage unknown. Not very common in State. (Boulanger).

LIGHT TRAP COLLECTIONS

	Pseud. unip.	Agrot. ips.	Prod. ornith.	Perid. saucia	Protoparce sexta quinq.		Heliothis zea vires.	
ARKANSAS								
Morrilton 6/2-8	42	13						
Kelso 6/2-8	2	2		1			6	
Fayetteville 6/2-8	6	3		1			5	
DELAWARE								
Bridgeville 6/2-6					10	2		
FLORIDA								
Quincy 5/23					8		12	
Sanford 5/27			7					
INDIANA (Counties)								
Lawrence 6/1-3,6	99	14		9	1		2	
Tippecanoe 6/2-9	8				1	1		
IOWA								
Ames 5/29-6/3	35	1		3				
Ankeny 5/30-6/3	2	1		4				
Soldier 5/29-6/2	58	31		5				
Columbus Junction 5/31-6/3	31	5		2				
KANSAS								
Garden City 5/31-6/2		22	6			13		
Hays 6/2, 4-5,7-8	30	42	4	12		2	18	
Manhattan 6/3-9	21	21	11	9			1	
Wathena 5/25-31,6/2-5	20		4			2		
LOUISIANA								
Franklin 6/6,8			11		1		15	
Baton Rouge 6/3-9			78	4			21	
Tallulah 6/4-10							3	1
MARYLAND								
Fairland 6/6-10		4		3				1
MISSISSIPPI								
*Stoneville 6/3-9	42	6	17	20	2		11	1
MISSOURI								
Columbia 6/5-10	69	86		1				
NEBRASKA								
Scotts Bluff 5/26-6/1	20	24		77				
Lincoln 6/4-9	28	5		6				
NORTH CAROLINA								
Faison 6/4-10		2	1		2	3		
SOUTH CAROLINA								
Charleston 5/31-6/12		7	29	15	7	1	8	1
Clemson 6/4-10	39	13	140	1	8	13	5	
TENNESSEE (Counties)								
Monroe 5/31-6/6	14	14	8	10	18	2	11	
Maury 5/31-6/6	21	65	41	5	34	10	10	
Robertson 5/31-6/6	8	13	3	3	13	3	1	
Cumberland 5/31-6/6	8	21	15	4			1	
Greene 5/31-6/6	30	1	2	1	2			
Blount 5/31-6/6	8	34	45	2	3	6	2	
Johnson 5/31-6/6	8	48	13	2	1		1	
TEXAS								
Brownsville 5/28-6/4	5	162	3			4	70	

* Two traps - Stoneville

STATUS OF SOME MORE IMPORTANT INSECTS IN THE UNITED STATES

PURPLE-BACKED CABBAGEWORM (Evergestis pallidata (Hufn.))

Economic Importance: The species was described from Europe in 1792 and was recorded in the United States as early as 1841 on horseradish leaves. Larvae feed on the lower leaf surfaces of host plants, often webbing them together near the ground. They sometimes attack the crown and bore into the stems and roots. Although the pest rarely attains sufficient numbers to be of much consequence, it occasionally becomes very abundant in localized areas and does a great amount of damage.

Distribution: Canada, Central Europe, Great Britian, Ireland and the United States (see map).

Hosts: Turnip, cabbage, horseradish. In Europe, the pest has also been recorded as feeding in confinement on certain wild plants: Barbarea vulgaris, Sinapis arvensis and Cardamine amara.

Life History and Habits: Overwintering occurs as a mature larva in an earth-covered pupal case near the surface of the soil. In Virginia adults appear in May and mate. The female deposits eggs in small flat masses of three to over a dozen in clusters. Hatching takes place in 7-8 days. Young larvae feed on the leaves of host plants, but when abundant, attack the stalks. They mature in about 3 weeks and pupate in approximately the same time. The life cycle lasts about 7-8 weeks, depending on the temperature. At least two generations a year occur in Virginia. The fall brood, which overwinters, is more injurious to the host plants.

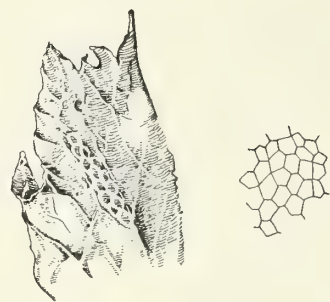
DISTRIBUTION OF PURPLE-BACKED CABBAGEWORM (Evergestis pallidata)



Description: EGG - Individual egg irregular oval, about 0.8 mm. in diameter. Surface finely reticulate and divided into shining, minute, irregular areas much like the surface of leather. Egg mass arranged more or less irregularly, as in the case of a honeycomb, bright-green in color. Each egg surrounded by irregular ring of yellow spots arranged in chains numbering about 12-18 per egg. Strong overlapping, so that egg mass somewhat resembles the pattern of fish scales. LARVA - Next to last larval stage is somewhat similar to mature larva, regarding the arrangement of the piliferous tubercles, but the form is more slender and the body tapers more at each end; general color dorsally, purplish with wide pinkish longitudinal band separating the two parts between the rows of piliferous tubercles. Mature larva about 18 mm. long and 3 mm. wide. Body tapers at both ends. Color purplish-brown to dark greenish-black dorsally, with a yellow stripe running through the spiracles. Underside of the body is dull greenish. Head black, cervical shield black on the sides and body is marked with numerous black tubercles. PUPA - Robust, about 8 mm. long and 3 mm. wide. General color brownish-yellow, but wing cases have distinct greenish tinge. Eyes large and black. ADULT - Body length about 10 mm., wing expanse about 25 mm. Forewings pale ocherous-yellow, sprinkled with dark brown, veins posteriorly dark brown; lines dark fuscous; an angularly 8-shaped discal spot, outlined with dark fuscous, touching angle of first line; a cloudy dark fuscous subterminal line, forming above middle of strong dark suffusion enclosing a pale terminal spot. Hindwings prismatic, yellow-whitish; traces of dark posterior line; termen narrowly dark fuscous. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies). CEIR 10(25):6-17-60.



A



C



B



Figures of Evergestis pallidata: A - Adult; B - Larvae (dorsal and lateral views); C - Egg mass on leaf (section of egg surface showing sculpturing).

Figures of larvae and egg mass from Chittenden, F. H. 1921. U. S. Dept. Agr. Bul. 966, 10 pp. Adult - USDA Photograph.

INSECTS NOT KNOWN TO OCCUR IN THE UNITED STATES

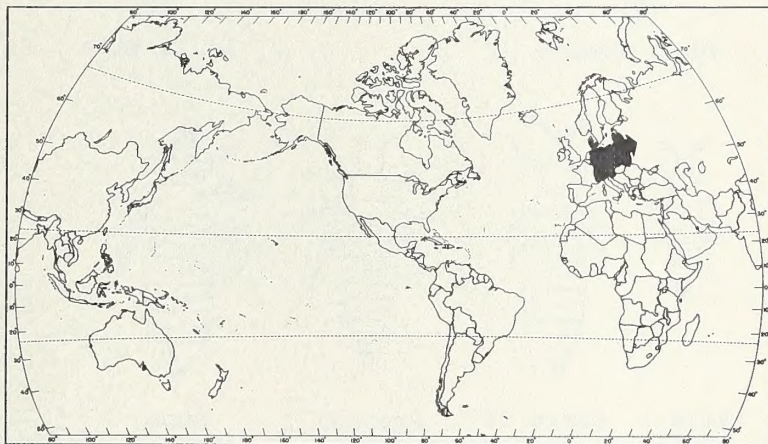
LARCH THRIPS (Taeniothrips laricivorus Kratochvil and Farsky)

Economic Importance: This thrips was first recorded as the causal agent of die-back disease of larch in 1941 in Czechoslovakia. A toxin is injected in the process of feeding by the thrips. Extensive areas in central Europe are now affected by this pest. Ten to twenty-year-old stands of European larch grown beyond its natural range have been especially damaged by attacks of this species in large masses, particularly in areas under the influence of oceanic climate. Infestations appear in the spring as new shoots sprout. Adults prefer to live on new top shoots and the degree of damage caused depends much on climatic conditions. Especially when the second generation of the insect coincides with a long dry season, as frequently happens in July, the infested top shoots often die. The loss of height increment renders the young larch trees unable to compete with other tree species and tree tops usually become deformed through the growth of secondary shoots.

The spread of T. laricivorus from its native habitat in the larch stands of south central Europe to its present range of distribution appears to have been a combination of factors; first, of course, was the increased cultivation of larches and the second was the supporting climatic factors.

Hosts: European larch (Larix decidua) and Japanese larch (Larix leptolepis) are recorded hosts, with the latter species being more resistant.

Distribution: The range of this species extends from Denmark to northern Yugoslavia and north Italy, from Czechoslovakia across Austria to Switzerland, and from southeastern France (Saar region) across Germany and Poland into the USSR. Its actual range into the USSR is not known.

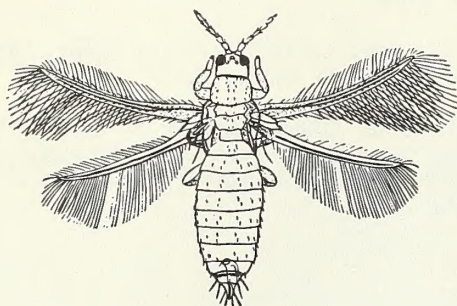


General Distribution of Taeniothrips laricivorus

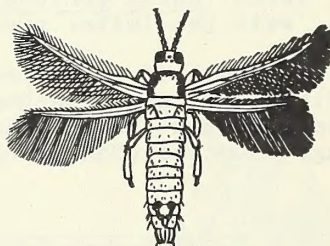
Life History and Habits: The biology as studied in Germany is as follows: Overwintered females appear on larch about the last of April or first of May and gather on new shoots. Eggs are laid during the following days and weeks in young, tender needles of the terminal shoot. Each female will lay about 42 eggs. Development from egg to adult consists of 6 stages; egg, larva I, larva II, prepupa, pupa, and adult. The development of the separate stages is dependent on various factors, such as temperature, moisture, wind and

quality of food. The larvae of stages I and II and the adults of the first generation feed on the young shoot tips, with adults of this generation usually appearing about the last part of June. A second generation will often follow the first; but the development of this generation is considerably shorter, with adults emerging about the first of August. In elevations over 1,500 feet, however, only one generation a year is supposed to occur.

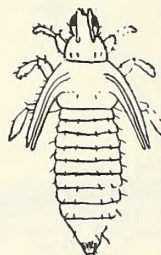
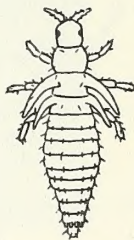
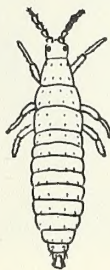
Description: ADULTS - Female averages 1.18 mm. in length, dark brown except for yellow (or light yellowish-brown) tip of second and entire third antennal segments, bases and apices of femora and tibiae, and entire tarsi. In gravid females, abdominal intersegmental membranes (or of the abdomen) appear as yellowish-brown transverse lines (stripes, bars, etc.). Male smaller, averages 0.85 in length; and lighter in color, orange-yellow except for dark apex of head and antennal segments beyond middle of third. EGG - Kidney-shaped and white, 0.330-0.350 mm. long and 0.155 mm. wide. LARVAE - Stage I has large head in relation to body and abdomen is sharply conical; color white. Stage II is yellowish, larger body than stage I and a sharper delimitation of antennal segments than in stage I. (Prepared in Survey and Detection Operations in cooperation with other ARS agencies). CEIR 10(25):6-17-60.



Adult Female



Adult Male



Larva I

Larva II

Prepupa

Pupa

Figures of Taeniothrips laricivorus

Major references: Nageli, W., 1944. Schweiz. Ztschr. f. Forstwesen 95(5/6):175-180. Schimitschek, E., 1955. FAO Plant Protect. Bul. 3(10):152-153. Vité, J. P., 1954. Anz. f. Schädlingskunde 27(11): 161-166. (Figures, except map, from Vité).

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